

# BUSINESS WEEK

WEEK  
AGO

YEAR  
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START  
OF WAR  
1939

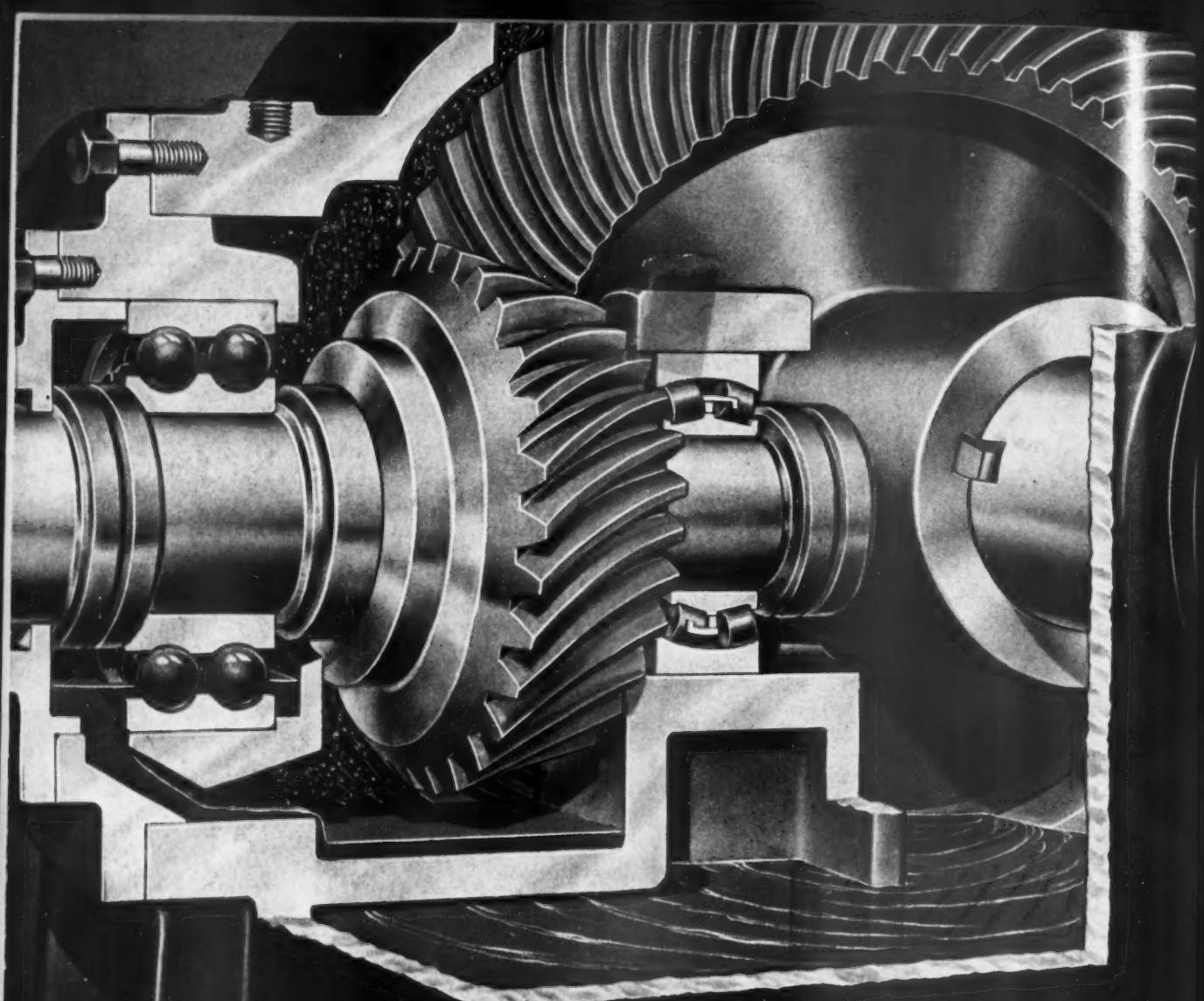


Nonstop flow of oil for East by next summer is assured as WPB says Texas-Illinois "Big Inch" can go on to Atlantic

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ALL AMERICAN  
GENERAL INSURANCE  
COMPANY OF NEW YORK



IF YOU FIGURED SUPPLIERS WERE  
**"Fresh Out" of Gears...**

**WHAT TYPE OIL  
WOULD YOU USE ON THE  
GEARS YOU HAVE?**

**I**F YOU believed it impossible to replace a single gear, a single machine in your plant...

*—you'd use only the best oil you could buy!*

This idea of machines being irreplaceable...of reserving new machines for

new tasks...makes the job of "oiling" one of the most important in your plant.

Take those spiral bevel gears above for instance. Pressure between those teeth may be terrific. The oil film must not break...must not wipe off. The oil must be stable.

That's just for one type of gears. You also have worm, spur, hypoid gears. And many others. Speed, heat, pressure, design—all make a difference.

'Refining and recommending lubricants is a professional job!'

Socony-Vacuum has had 76 years' experience—the world's greatest in this field. Your irreplaceable machines deserve no less!

**SOCONY-VACUUM OIL CO., INC.**—Standard Oil of New York Div. • White Star Div. Lubrite Div. • Chicago Div. • White Eagle Div. • Wadham Div. • Southeastern Div. (Baltimore) • Magnolia Petroleum Company General Petroleum Corp. of Calif.

TO HELP MAINTAIN CAPACITY PRODUCTION—CALL IN

**SOCONY-VACUUM**



*for Correct  
Lubrication*

# TUBELESS TIRE INVENTED BY B.F. Goodrich

Sensational rubber-saving development promises  
big after-war savings for commercial users



*Great*  
*A typical example of B. F. Goodrich development in truck tires*

CLIMAXING a 50-year dream of tire engineers, The B. F. Goodrich Company announces an invention which eliminates the use of inner tubes in heavy vehicle tires.

#### Tested and Proved

The new B. F. Goodrich tubeless tire has been tested and proved both in the laboratory and on the highway and is now undergoing further impartial tests. While the amount of rubber saved by this new invention varies depending upon the size of the tire, the saving is approximately 7% to 17% of the rubber content of the casing, tube, and flap combined.

The Silvertown that doesn't need a tube has been made possible by a simple change in truck tire design plus a mechanical device the details of which are being kept secret in the interest of national defense. The tire is inflated just like any ordinary tire and tube—but instead of the air going into a tube, it goes directly into the tire and stays there.

If put into use during the war, the tubeless tire will be a major step in the conservation of America's precious rubber stockpile. That's good news to all of us. And it's good news to every truck and bus operator to know that

after the war inner tubes may become a thing of the past.

Remember, the inner tube is the source of much tire trouble. Do away with the tube and you have eliminated the cause of many, many failures! Mounting tires is easier. And repairs can be made quickly because there is no tube to consider. Just think what this would mean in terms of lower costs, fewer delays, and simplified repairs! It's too early to make promises—but here is a hint of more good news to come later. In war or peace, you can always look to B. F. Goodrich for leadership.

#### Here are a few of the many B. F. Goodrich "Firsts"

**First** in America to build cord tires for automobiles.

**First** to develop a black tread for longer tire wear.

**First** to make airplane De-icers.

**First** to build a successful endless rubber track for vehicles.

**First** to make the Zipper overshoe.

**First** to offer American car owners synthetic automobile tires.

**First** to discover Duramin, a combination of chemicals that makes rubber resist ageing.

**First** in the field of vinyl elastomers with the discovery of Koresol.



# PROPER TREATMENT OF YOUR MECHANICAL RUBBER EQUIPMENT CAN INCREASE ITS SERVICE LIFE AS MUCH AS 50% . . . INCREASE THE WAR STRENGTH OF AMERICA'S RUBBER SUPPLY

THE war strength of our nation's rubber supply is entirely a matter of how far a limited quantity can be made to go. Consequently, while the supply is limited . . . until such time as it can be adequately supplemented by other types of raw materials . . . it is both a patriotic duty and a business expedient that industry do everything possible to make its mechanical rubber equipment last. Every extra hour that your belting, hose or other industrial rubber products operate releases rubber to other war purposes.

In line with the vital need for care in the use of mechanical rubber goods, Republic has pooled its specialized knowledge to prepare a practical digest on the prescribed methods for maximum service life. Handy six by nine inch size with speedy thumb index and comprehensive drawings, this valuable handbook is designed to facilitate your rubber conservation efforts in every possible way. Write for your copy today. REPUBLIC RUBBER DIVISION OF LEE RUBBER & TIRE CORPORATION, YOUNGSTOWN, OHIO.



Your Republic Distributor is qualified and willing to assist you in assuring that your mechanical rubber equipment is installed and operating properly. Why not coordinate his service with your use of the Republic Handbook?



Throw Your  
SCRAP  
into the  
Fight

# REPUBLIC

HOSE • BELTING • PACKING • MOLDED  
GOODS • EXTRUDED PRODUCTS



# RUBBER

## BUSINESS WEEK

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# WASHINGTON BULLETIN

## WHAT THE WASHINGTON NEWS MEANS TO MANAGEMENT

### Materials Dictate Strategy

Now its The Plan Nobody Knows. Washington is beginning fumblingly to explore the implications of the Controlled Materials Plan, which Ferdinand Eberstadt trotted out before the public this week (page 15). CMP is a lot more than a substitute priority system.

It may shape the pattern of industry for years to come if the war lasts long enough to let it get a real grip. It will unquestionably influence the strategy of the war, since industrial strategy is now better organized than military.

Operations of CMP will force the military to freeze plans for munitions production, will force them correspondingly to decide what kind of a war they'll fight in 1943 and 1944.

### Cartels in the Making

Unless future changes in personnel and high policy should alter the whole tone of the Controlled Materials Plan, it points to an unprecedented cartelization of industry.

Officials drafting the plan drew much of their inspiration from the highly-organized Detroit industries, but they also studied closely the German plan, which throws onto the big industry cartels the major burden of scheduling production and gearing it to material supply. In the manufacturing industries, WPB's Office of Program Development has ("as yet," says Eberstadt) no such all-embracing units to lean on.

But even with this limitation, the plan throws as much as possible of the complex technical programming on to the major end-product contractors. Given a schedule of end-product deliveries, it is up to the prime contractor to work out and set the schedules for production of the thousands of items that go into the finished product.

• **Liaison Is Necessary**—This will tend to create close-knit aggregations of firms clumped vertically around the big companies doing the final assembly operations. Moreover, the plan unquestionably encourages close horizontal liaison among the different concerns delivering, say, tanks, or artillery. Reconciliation of the schedules produced by the different arms producers is theoretically the job of the armed services and WPB, but cooperation at the operating level will naturally develop.

### Another Step Toward an NRA

Government officials, unless they are opposing it on principle, will incline to

welcome development of more or less self-governing cartels within industry, because it will simplify their own jobs. And the unmistakable NRA-ward trend in the top war agencies (BW-Oct.17 '42,p5) suggests that there won't be much opposition on principle.

### CMP and Civilian Life

Primarily, the Controlled Materials Plan is angled toward the dominant munitions industries. It's by no means clear, as yet, what the plan may hold in the way of scheduling civilian goods production. Some products will definitely be scheduled by the industry branches and by WPB's Office of Civilian Supply. Unquestionably it means tighter, more detailed controls over their operations than now exist.

Leon Henderson's WPB job as chief of civilian supply assumes real importance for the first time. Nearly all the industry branches have increased responsibilities. The Steel, Aluminum, and Copper Branches particularly hold key places in the operation of CMP. The Steel Branch went through a reorganization, and Washington now expects a shakeup in the Copper Branch.

### Changes in the Branches

The quiet reorganization of recent months in the top levels of WPB is now making itself felt downstairs. That's why the branches of WPB are getting new authority and responsibility.

Labor representatives are to be put into the major branches as has already been done in the Steel Branch (BW-Oct.24'42,p8). So will representatives of the Army, Navy, Maritime Commission, Lend-Lease, and Board of Economic Warfare.

Resignations of A. I. Henderson as Deputy Director of Operations and of Merrill C. Meigs from the Aircraft Division are only the start of a big turnover in WPB personnel.

• **Wilson's New Helper**—An intriguing change is the appointment of Mordecai Ezekiel as special assistant to Vice Chairman Charles Wilson. This left-wing economist of the early New Deal is to do for Wilson the sort of fact-finding job that Isadore Lubin does for the President.

### Story of the Ballot Box

Republican gains in this week's elections won't have great practical effect on White House, war front, or home front policies.

The turnover, however, was bigger than F. D. R. expected. It gives him reason to think about 1944, but the only thing he can do now to help him in 1944 is to start winning the war.

In Congress, on issues like manpower and taxes, partisan labels rub off. On farm price control, on the 'teen age draft, the strongest resistance came from Democratic ranks.

• **Chamber to Senate**—Many business men found special significance in New Jersey's "business victory" by which Republican Albert W. Hawkes, former president of the Chamber of Commerce of the United States, snatched a seat in the U. S. Senate from Democratic Hague-machine politician William H. Smathers.

### End of the Specialist Corps

The Army Specialist Corps, abolished this week as an admitted failure, was foredoomed. The Army unit on which it was dependent for requisitions of men didn't like it. They preferred to grant Army commissions to men they wanted rather than deal with such an anomaly as a commissioned, uniformed civilian.

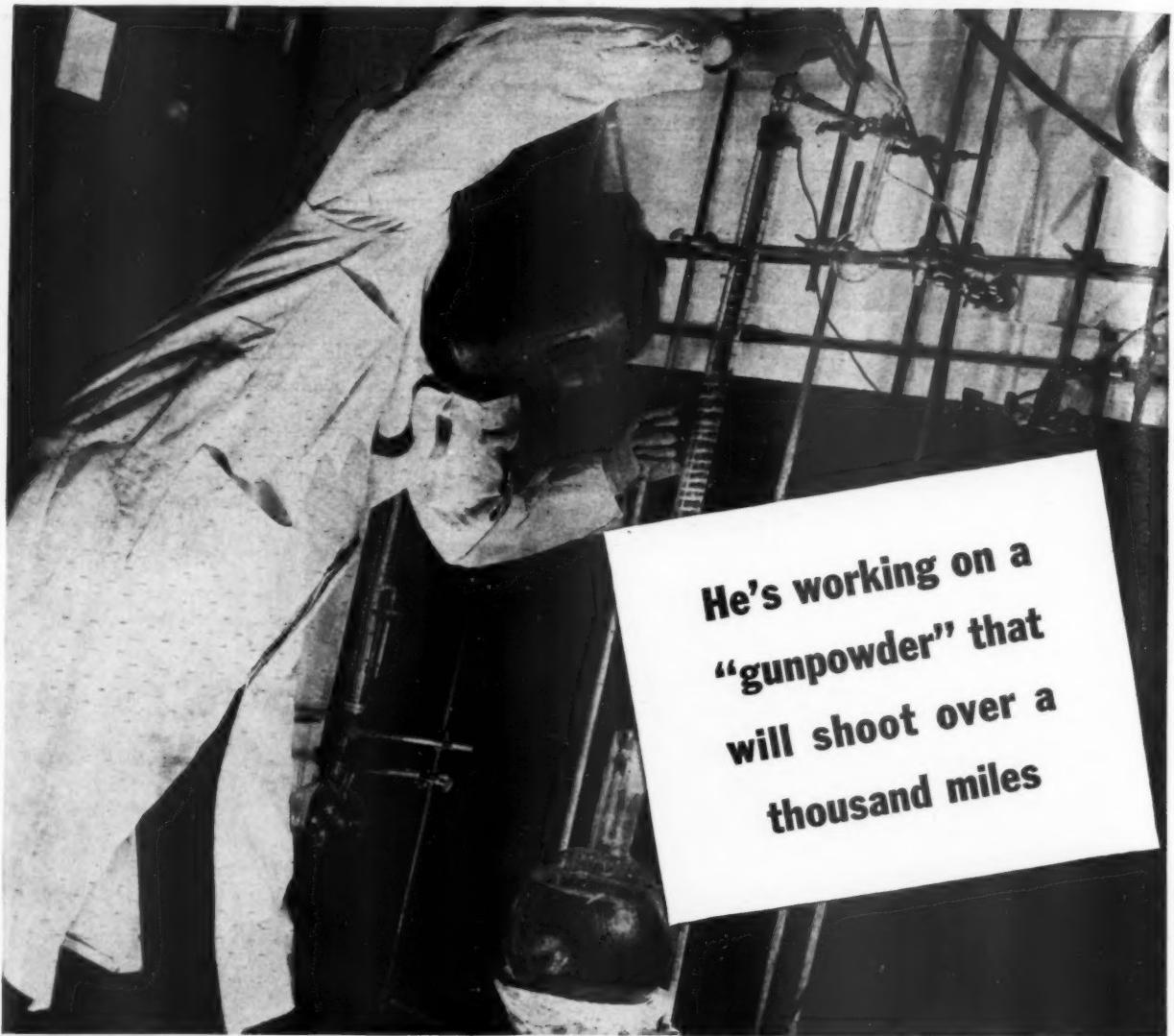
Moreover, the potential specialists themselves didn't like it. Although the corps had 300,000 applications in its files, only about 35,000 of these were live ones; the rest were either ineligible or came from fields—insurance and real estate men and the like—for which there's little military demand.

• **Restrictions**—Commissions direct from civilian life will be granted in future only to men over 34, not classified 1-A or 2-A or 2-B in the draft. They will wear specialist insignia until they have gone through an Army school. Most of the 1,923 men now in the Specialist Corps will be given commissions.

### Manpower Probabilities

Even though the President should accept McNutt's labor-management committee recommendation that he put Selective Service directly under the War Manpower Commission, it won't finally settle the issue of how manpower is to be run. McNutt is under pressure from so many directions (p35) that it will take more than an executive order to bolster him up.

The other major recommendation in the report is pretty sure to go through, because it probably doesn't need White House action for McNutt to order all war plants to do their hiring through the U. S. Employment Service (provided that agency doesn't collapse under



**The black powder** of the American Revolution could lob a cannon ball about a mile. At the time of the First World War the normal heavy artillery range, with smokeless powder, was about twenty miles.

For this war, chemical research developed a propellant that has a range of hundreds—even thousands—of miles. Already it has carried four-thousand-pound projectiles from somewhere in England straight to the heart of German industry. It has dropped destruction on a Japanese fleet that was nearly a thousand miles from our outposts. From "Shangri La" it sent all Tokio scurrying for cover.

The new "gunpowder," which has changed the whole strategy of war, is *high-octane gasoline*.

In modern aerial war the bomb is the shell, the airplane is the cannon and high-octane aviation fuel is the propelling charge. The side which has the best aviation fuel—the one which gives the most power, the greatest range per gallon—enjoys an advantage of tremendous value.

Fortunately for the United Nations, the development of high-octane gasoline was a triumph of the American petroleum industry. Long before Pearl Harbor, U. S. petroleum chemists were seeking and finding new and better components for aviation fuels—iso-octane, Ethyl fluid and many others—developing processes and facilities for producing these aids to high-octane quality in volume. They advanced the art of refining petroleum from a simple distilling and crack-

ing process to a science of synthesizing special chemicals—then blended these chemicals into fuels of predetermined characteristics and quality. Since Ethyl fluid plays an important part in the manufacture of high-octane fuels, Ethyl research engineers have cooperated with petroleum technologists in their search for better fuels. And because fuels and engines are inseparably related in their development, we work with engine designers in their efforts to get the most from these superior fuels. Today it is our privilege to furnish our product and devote our technical experience to the cause of American victory.

**ETHYL CORPORATION**  
Chrysler Building, New York City  
*Manufacturers of Ethyl fluid, used by oil refiners to improve antiknock quality of aviation and motor gasolines.*



# WASHINGTON BULLETIN (Continued)

the load). Elimination of all voluntary enlistment has been a long-time manpower and Selective Service objective, but the Navy will fight it hard.

• The Ladies—Unless registration of women is slipped into the 'teen-age draft bill, the 3,000,000 more women for which need is seen this year will have to be recruited without the dubious aid of a compulsory registration, which will require legislation.

## New Troubles Over Tariffs

The Board of Economic Warfare may have put Roosevelt on the hot spot by prompting his recommendation to Congress that he be authorized to suspend operation of tariff, customs, immigration, and similar laws when their restrictions interfere with the conduct of the war. Principal reason for the recommendation was to cut red tape hampering interchange of goods between U. S. and Canada.

Cattlemen in Congress are expected to raise the old howl over importation of Argentine beef, their apprehension sharpened by the shortage of meat. Labor and other elements probably will object to any authorization broad enough to permit the President to suspend immigration restrictions.

## For Food Control

The Budget Bureau has moved in to unscramble conflicting plans for the organization of an over-all, centralized wartime food policy coordinating agency—a U. S. food administration or a food director. Of the four possibilities, two are running neck-and-neck. As to the final outcome, you put down your money and take your choice. The down-the-stretch leaders are:

(1) Creation of a U. S. food administration under WPB Boss Nelson—a setup with the same powers over food that Jeffers has over rubber. Six months ago, Nelson could have had supreme food control by lifting his little finger. He preferred, then, to concentrate on guns, planes, and tanks, and allowed food to slip through his hands.

(2) Centralization of food policy control under Stabilization Director Byrnes, who already has jurisdiction over broad Agriculture Department and OPA policies.

• Byrnes Strength—The other two possibilities are: placing food policy control under Secretary of Agriculture Wickard, or creation of an entirely new independent agency. The food industry is opposed to Agriculture Department control; farm groups oppose the naming of a food industry man. That's why Byrnes is running neck-and-neck with Nelson

despite the latter's last-minute efforts to get the job he passed up six months ago.

## Relief on Prices Tightened

As expected (BW-Oct. 24 '42, p28), OPA has junked Section 18 of the General Maximum Price Regulation—the section permitting petitions for individual relief. OPA says the change was made "to concentrate on the constant improvement of its basic regulation affecting many sellers rather than continue to divert its energies toward the ironing out of individual situations."

Result: Retailers may not file relief petitions after Nov. 30. For manufacturers and wholesalers, the deadline is Nov. 15. The service trades, however, may petition up to Jan. 1, 1943, because they got under the GMPR later than the merchants and manufacturers.

A new regulation is now being worked out, which gives OPA the power to adjust prices on a big, broad scale, and to boost ceilings locally when necessary to counteract shortages.

## Fair Trade and OPA

The prospects for fair trade violators who hide behind the General Maximum

Price Regulation took a turn for the worse last week. In New York, the Appellate Division ruled that a druggist who had been violating fair trade laws in March did not thereby gain lower price ceilings as the result of such "unfair trade practices." As penalty, the druggist was barred from selling 45 articles unless OPA permits him to boost prices. OPA, in line with its new policy to "lay off" fair trade cases, did not figure in the proceedings. Meantime, however, OPA once more restated its fair trade policy:

(1) Where a retailer was selling below fair trade prices in March, or has been enjoined by a court from selling below fair trade minimums, he may petition for relief.

(2) On the other hand, manufacturers should not issue resale price lists that interfere with retail ceilings.

## Trouble in Tools

WPB tool division's "request" that the machine tool industry redistribute its billion-dollar, nine-month backlog, to cut the delivery period by about one third, looks gentle enough on the surface, but there's a kick in it.

Without saying so, it gives the popular builders, some of them with deliver-

## The Elections and Business

Election news of prime importance to business was mostly in special proposals to voters in several states. Here are some results:

• Chain Taxes—Chain store interests were breathing easier this week after defeat of a proposed Utah chain store tax law, which would virtually have frozen chains at their present size. This would have imposed normal taxes, ranging from \$50 for stores in a chain of less than 100 outlets up to \$500 a store for all units over 500, and these would have been multiplied by ten for every new unit opened. Chains were not so much afraid of the loss of Utah business as they were of the precedent that would have been established if this measure—a lineal descendant of Representative Patman's famed chain store death sentence proposal—had gone on the statute books. Utah voters turned it down by a vote of 2 to 1.

• "Hot Cargo"—California voters, in a close election, upheld the law which bans secondary boycotts (a burning issue for several years). The so-called hot cargo act was passed after the state supreme court had

declared secondary boycotts legal. At issue were cases like this: A farmer employs nonunion fruit pickers, gets his crop ready for shipment, then watches it rot as union truckers refuse to handle it because it wasn't picked by union men.

• Milk Prices—George Johnson, price-cutting milk dealer of Detroit, who proved the stormy petrel of the dairy hearings conducted by the Temporary National Economic Committee two years ago, could boast this week that he had won his fight against the big milk distributors, for on the basis of early returns, Michigan voters had turned down the proposal for establishment of a state milk marketing board. Such a board, Johnson and his adherents argued, would have been used to fix minimum prices at levels dictated by the big dairies—levels considerably higher than Johnson's prices.

• Intangibles—Nevada remains a good place to domicile your intangible assets. Voters amended the state constitution so as to forbid specifically the imposition of taxes on shares of stocks, bonds, mortgages, and certain other intangible assets.

## WASHINGTON BULLETIN (Continued)



To blast the enemy out of the sky . . .  
20,000 anti-aircraft guns in 1942 . . .  
35,000 anti-aircraft guns in 1943 . . .  
That is America's promise to the Victory Program—and America is going to beat that promise.

We are building a new America of huge new plants . . . enlarging facilities to insure ever-increasing production of weapons needed so urgently by our armed forces.

Behind this tremendous building program is steam. For steam serves America in war, as in peace. Steam, harnessed and brought under control with Webster Steam Heating Equipment, provides the heating comfort essential to all-out production.

Today, we are engaged in direct war work, but manufacturing facilities are still available to supply Webster Steam Heating Equipment for plants serving the war effort.

Essential repairs for Webster Systems are available on A-10 priority, under W.P.B. Emergency Repair Order P-84. Orders should be limited to actual needs.

Warren Webster & Company, Camden, N. J.  
Representatives in 60 principal Cities

**Webster**  
Steam Heating

ies scheduled 18 months hence, the choice of delivering or handing over their own designs for production by competitors, or even by outsiders who might become competitors. The industry feels it is already running red hot and resents having WPB build a fire under it.

• Still Voluntary—So far, WPB is leaving it to the tool builders to divvy up the orders themselves rather than doing the job by government fiat.

### Trucking Cut 25% Plus

Relations between the Office of Defense Transportation and private motor carriers have been badly strained by ODT's backdoor approach to the administration of the Certificate of War Necessity Plan. Under ODT Order 21, no commercial vehicle can operate after Nov. 15 without this certificate.

ODT 21 got off to a bad start. When it was announced Transportation Boss Eastman explained to truckmen that the order was designed only to enforce previous conservation measures—primarily those imposed by ODT Order 17, which required a flat 25% mileage reduction under 1941.

When, however, it came to making out the certificates of necessity, which specify the precise amount of mileage each motor carrier operator can run his trucks, ODT has been using what it calls a "load factor" instead of the figure resulting from the flat 25% mileage cut. Under the "load factor" computation, competing truckmen may get different mileage cuts—one may be cut 25%, another as high as 50%.

### Overseas Truck Drivers

The trucking industry—already bedeviled by serious labor shortage—has pulled further on its manpower in assembling the backbone and most of the body of two regiments of top-notch truck operating men for immediate overseas duty. Others may follow later.

Starting from scratch, the industry rounded up in a few days more than 4,000 volunteers, including a slate of 240, from which commissioned officers will be drawn. Army proposes "activating" the new regiments about Nov. 20.

Personnel covers complete truck operating setup—foremen, dispatchers, mechanics, heavy truck drivers.

### Putting Lewis on Spot

Bureau of Internal Revenue and Department of Justice agents are investigating the affairs of District 12 of John L. Lewis's United Mine Workers of America. District 12 covers the state of

Illinois and is not an autonomous section of the miners' union. That means that Lewis appoints all the district officials, and they are responsible only to him. Hence, whatever may be found in the way of tax violations and conspiracy activities—and that is what the federal men are supposed to be looking for—can conceivably be pinned on Lewis himself.

Other labor leaders, who would be delighted to see the skids put under the shaggy mine chief, are frankly appalled at the "strong arm methods."

• Tactical Error—Almost any other kind of attack on Big John would win support from his former colleagues in both the American Federation of Labor and the Congress of Industrial Organizations. Putting him on this kind of spot, however, will bring him allies.

### Capital Gains (and Losses)

Reluctance of everybody in Washington, except McNutt, to tackle the manpower problem head-on is almost amusing. As a "first step," the U. S. Chamber of Commerce would like to have this hot potato referred to the Baruch rubber committee.

An industry advisory committee has been named to work with the Budget Bureau on simplification and elimination of government questionnaires and forms. You can help by bearing in mind that after Jan. 1, you do not need to reply to a questionnaire from any government agency that doesn't bear the Budget Bureau's symbol.

Government lease of 10 privately-owned shortwave stations merely formalizes their wartime operating methods. Station personnel eventually may be absorbed by government. Still holding out, World Wide Broadcasting Foundation is expected to sign up soon.

Two economists were raised to prominence in the economic stabilization program this week. Walter R. Stark moved from the Federal Reserve Board to James F. Byrnes's staff. One of the top jobs in the expanding National War Labor Board will go to Carroll Dougherty, Hunter College professor, as chief economist. Dougherty had a similar job in the Labor Department's wage-hour division.

Advance rumors about the coming of Controlled Materials Plan have seriously interfered with the functioning of the Production Requirements Plan. Many companies, not understanding that CMP won't be fully effective for eight months, have failed to turn in their first-quarter PRP applications. On the Nov. 1 deadline, about 11,000 plants were still to be heard from.

—Business Week's Washington Bureau

# FIGURES OF THE WEEK

	\$ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
THE INDEX (see chart below) . . . . .	*189.1	†188.8	186.5	177.6	161.2
<b>PRODUCTION</b>					
Steel Ingot Operations (% of capacity) . . . . .	99.6	101.1	98.6	98.6	98.2
Production of Automobiles and Trucks . . . . .	20,925	20,825	19,930	22,015	92,879
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands) . . . . .	\$21,140	\$20,361	\$29,038	\$40,840	\$11,826
Electric Power Output (million kilowatt-hours) . . . . .	3,775	3,753	3,683	3,305	3,380
Crude Oil (daily average, 1,000 bbls.) . . . . .	3,901	3,917	3,685	3,335	4,071
Bituminous Coal (daily average, 1,000 tons) . . . . .	1,892	1,900	1,898	1,916	1,863
<b>TRADE</b>					
Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars) . . . . .	87	87	86	84	94
All Other Carloadings (daily average, 1,000 cars) . . . . .	63	63	64	59	58
Money in Circulation (Wednesday series, millions) . . . . .	\$14,082	\$13,995	\$13,708	\$11,723	\$10,307
Department Store Sales (change from same week of preceding year) . . . . .	+18%	+16%	+5%	+13%	+8%
Business Failures (Dun & Bradstreet, number) . . . . .	158	145	174	199	187
<b>PRICES (Average for the week)</b>					
Spot Commodity Index (Moody's, Dec. 31, 1931 = 100) . . . . .	232.5	233.0	235.6	231.3	209.0
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939 = 100) . . . . .	155.4	155.6	155.3	153.5	144.9
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939 = 100) . . . . .	185.0	185.2	187.0	184.2	158.1
Finished Steel Composite (Steel, ton) . . . . .	\$56.73	\$56.73	\$56.73	\$56.73	\$56.73
Scrap Steel Composite (Iron Age, ton) . . . . .	\$19.17	\$19.17	\$19.17	\$19.17	\$19.17
Copper (electrolytic, Connecticut Valley, lb.) . . . . .	12,000¢	12,000¢	12,000¢	12,000¢	12,000¢
Wheat (No. 2, hard winter, Kansas City, bu.) . . . . .	\$1.20	\$1.20	\$1.22	\$1.15	\$1.12
Sugar (raw, delivered New York, lb.) . . . . .	3.74¢	3.74¢	3.74¢	3.74¢	3.50¢
Cotton (middling, ten designated markets, lb.) . . . . .	19.13¢	18.98¢	18.71¢	20.10¢	16.20¢
Wool Tops (New York, lb.) . . . . .	\$1.232	\$1.228	\$1.222	\$1.266	\$1.285
Rubber (ribbed smoked sheets, New York, lb.) . . . . .	22.50¢	22.50¢	22.50¢	22.50¢	22.50¢
<b>FINANCE</b>					
90 Stocks, Price Index (Standard & Poor's Corp.) . . . . .	74.7	74.8	72.1	61.5	76.1
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's) . . . . .	4.24%	4.24%	4.25%	4.27%	4.27%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's) . . . . .	2.80%	2.80%	2.80%	2.84%	2.73%
U. S. Bond Yield (average of all issues due or callable after twelve years) . . . . .	2.33%	2.32%	2.35%	2.38%	2.22%
U. S. Treasury 3-to-5-year Note Yield (taxable) . . . . .	1.28%	1.28%	1.28%	1.02%	0.78%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average) . . . . .	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6 months, N. Y. City (prevailing rate) . . . . .	§-1%	§-1%	§-1%	§%	§%
<b>RANKING (Millions of dollars)</b>					
Demand Deposits Adjusted, reporting member banks . . . . .	28,639	28,431	27,424	25,358	24,258
Total Loans and Investments, reporting member banks . . . . .	37,549	37,714	35,954	31,205	29,582
Commercial and Agricultural Loans, reporting member banks . . . . .	6,316	6,347	6,270	6,726	6,554
Securities Loans, reporting member banks . . . . .	898	899	907	836	962
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks . . . . .	23,786	23,931	22,054	16,405	14,648
Other Securities Held, reporting member banks . . . . .	3,443	3,442	3,539	3,706	3,731
Excess Reserves, all member banks (Wednesday series) . . . . .	2,160	2,350	1,690	2,815	4,602
Total Federal Reserve Credit Outstanding (Wednesday series) . . . . .	4,578	4,494	3,774	2,443	2,250

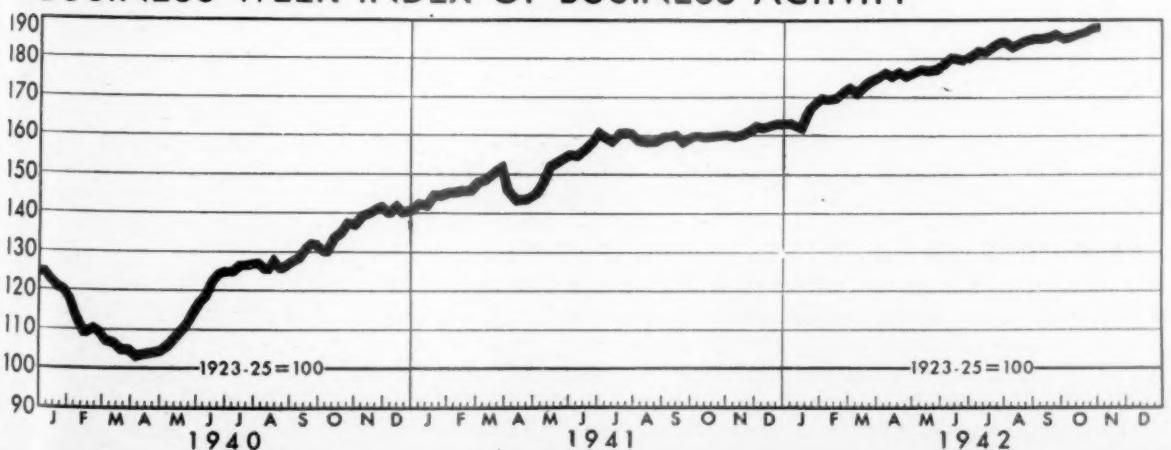
Preliminary, week ended October 31st.

† Revised.

Ceiling fixed by government.

§ Date for "Latest Week" on each series on request.

## BUSINESS WEEK INDEX OF BUSINESS ACTIVITY





## *"If I were twice as big"*

"Then I could give the public all the service it wants and take care of the war on top of that.

"But I can't get bigger now because materials are needed for shooting. So I'm asking your help to make the most of what we have.

"Please don't make Long Distance calls to centers of war activity unless they are vital. Leave the wires clear for war traffic."

BELL TELEPHONE SYSTEM



# THE OUTLOOK

## Elections Over, Pace Faster

Washington prepares to step on the war accelerator and industry may expect to run into new type of curtailment. Gets "last" materials plan, awaits first manpower program.

With the passing of elections, marked progress in the Egyptian offensive, and announcement of new materials control (page 15), business men this week first seemed optimistic, then turned to realistic appraisal of the political, military, and economic developments.

Unquestionably, the news was favorable. Business accepted Republican gains as a healthy advance for bipartisan government. Allied success against Rommel renewed hopes for strategic advances of vital significance. And the Controlled Materials Plan promised not only to improve the flow of supplies to manufacturers, but also to increase net production.

### Ready to Tackle Problems

At the same time, prospects for a new acceleration in wartime adjustments have been reinforced. Politicians' fears that unpalatable war controls might react upon the electorate have in part been confirmed. Now that the next test of popularity is two years away, the tendency will be to clear the decks of necessary manpower, tax, and other measures as long before November, 1944, as possible.

Here the course of the war ties in. Mounting the offensive in Egypt is but the prelude to assumption by the United Nations of the strategic initiative generally. As the Solomons illustrate in small measure, the nation's war effort is progressing from the realm of production to that of battle. Inevitably, economic strains will intensify and, with them, the need to set the domestic house in order.

### Shift in Emphasis

War Production Board Vice Chairman Eberstadt's characterization of the CMP as the "last" such measure symbolizes the fading importance of the materials problem as a prime determinant of changes in business operation. Other considerations are coming to the fore.

Take the paper industry. U. S. and Canadian production agencies have frozen output of paper and products at the April-September average level, approximately 87% of capacity, despite ample raw materials in the form of forest reserves. This action and cuts in quotas, to come, are intended to release labor, transport, and other facilities.

available facilities. But, priorities on transport may well be a "hot" problem by spring.

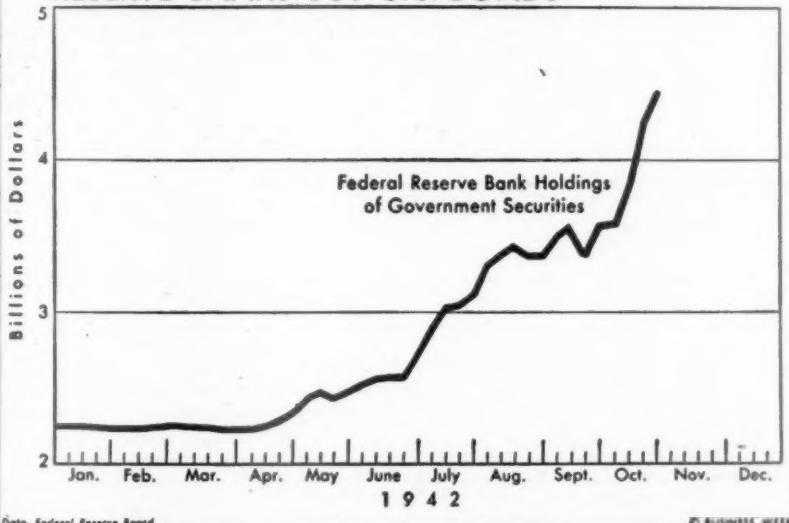
Similarly, power rationing, tried in the Southeast in early 1941, may yet be necessary in some areas because of hydroelectric shortage—because of mushrooming war demands, or even, possibly, because of inadequate fuel output.

Manpower, of course, is the chief problem. Centralization of authority was this week clearly put first on the agenda by the Labor-Management Advisory Committee report (page 104). Beyond that, a national registration of women and an extension of the work-week would provide added reserves. But such moves will only relieve the stringency, and when and if new legislation is required to place the labor market on an efficient plane, Congress's mood may not prove so formidable a stumbling block as before Nov. 3.

### Deeper Inroads

Coordinated control is likely to put the economy through the wringer in

### IN THE OUTLOOK: RESERVE BANKS BUY U.S. BONDS



© BUSINESS WEEK

A favorite device for monetary control is the power of the Federal Reserve Banks to buy and sell government securities in the open market. Since last April the federales have been supporting the market by systematic purchases. Their backing has kept the heavy Treasury borrowing from pushing prices below par. At the same time, it has furnished member banks with the additional reserves they need to buy government bonds for their

own account. Early in April, the Reserve Banks held a total of \$2,244,000,000 in government securities. By the end of last month, their portfolios had doubled, reaching \$4,441,000,000 on Oct. 28. In the week ended Oct. 21, the open market committee, acting for the twelve central banks, bought up \$415,000,000 worth of securities. This is the largest single purchase of securities in the history of the reserve system.

order to yield the required additional soldiers and war workers—particularly if casualties in the new offensive phase of American war run high.

Additional manufactures will be concentrated or curtailed. Talk of shifting farm production from non-essential to essential, and more important, of squeezing out marginal farms, marks a profound shift in attitude towards agriculture. Canada's experiments with concentrating distributive trades may yet provide American parallels (page 44). Surpluses and shortages of labor by particular areas will soon become a determining factor in distribution of new war contracts awards (page 22). And so on.

This further mobilization for war, even accompanied by a high resolve to preserve essential features of the civilian economy, will nonetheless serve to chop off the frills and furbelows of peacetime life.

Problems of inflation-control will be multiplied. Increasingly, ration coupons—in their multiplicity of particular forms (BW—Oct. 17 '42, p104)—will become the medium of exchange for retail operations, as disparities between consumer demand and supply draw down distributors' stocks and create successive shortages.

Concordantly, the "hot money" problem, as the breeder of civilian shortage, is assuming new importance in the attack on inflation. But, despite the release from immediate election worries, congressional wrangles over methods—if not ends—are inevitable. For, not only will the electorate's pocket books be involved, but also new economic approaches to taxation.

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### Troubles of Aeronautical Chamber of Commerce come home to roost; Coast members start flood of resignations.

Which of many straws broke the back of the Aeronautical Chamber of Commerce of America last week would be hard to say. Aircraft manufacture members met in Washington to decide whether to clean house or abolish their old trade association and start over. Col. John H. Jouett, who had been the middle man in a dogfight for months, resigned immediately and joined Andrew J. Higgins, New Orleans boat and shipbuilder, who had just received an order for 1,200 heavy cargo planes, to be produced around an existing design of Curtiss-Wright.

• **Lots of Members—and Dues**—Over-efficient membership promotion was one factor blamed for the blowup. As some members saw it, aviation schools, parts makers, publicity men, "and all sorts of riffraff" had been admitted to voting status, until airframe manufacturers had all but lost control of their own organization.

Membership dues have been prorated on the volume of a manufacturer's production. War had increased airplane and engine output till dues totaled around \$350,000 this year. Some member raised the complaint that, to spend this money, the chamber's staff and quarters had been expanded out of proportion to the service they were getting.

And the prospect of \$600,000 or \$700,000 total dues next year moved some to puncture the balloon now.

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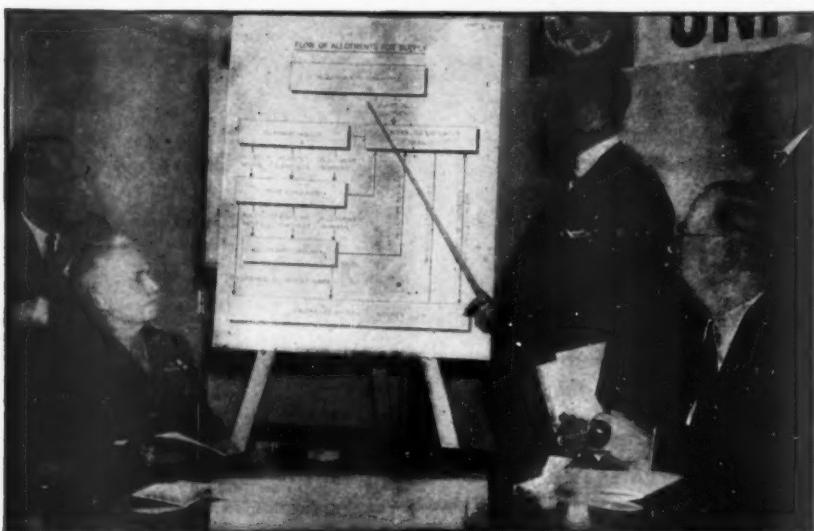
• **Resignation Shower**—Then, one morning last week, the chamber woke up with a lapful of resignations from the West Coast. By weekend it had been given its walking papers by nearly the entire industry, except Boeing of Seattle.

Probably the shakedown will proceed slowly, because the members have paid their dues for this year, and they can take their time and lose nothing, now the break is made.

With the unloading of the parts and air school men, new lines of cleavage are opening to public view. Some of the airframe men don't like the influence of the engine and propeller members, either. All three of these are big industries while the war lasts, and they would like to go their individual ways on some matters. How they can do that and still stick together, in the contraction that will come with peacetime is one of their problems. Another one is the over-all influence of Curtiss-Wright and United Aircraft, both of which are leaders in all three lines.

• **"In" for Auto Companies?**—Washington figures that the airplane family quarrel has made a fine opening for a horn-in by the automobile industry, which is now turning out large quantities of airplane parts, engines, and even complete planes. The Aero Chamber has been calling itself "old line" and, from the Detroit viewpoint, snooting the auto boys as new-come country folks. But apparently no overt act was on record.

Meanwhile, the chamber is still functioning, and "contenders" who claimed the belt the other day when Joe Louis' retirement was reported were not more numerous than the would-be presidents who want to sit in Jouett's hot seat.

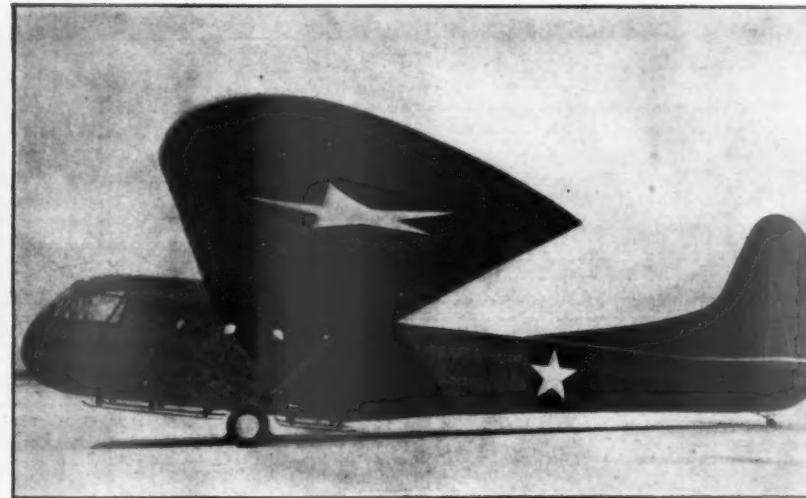


The first public demonstration of the intricate workings of the Controlled Materials Plan by WPB's Vice Chairman, Ferdinand Eberstadt (with pointer), foreshadows countless other explanations which Eberstadt and his colleagues will be called upon to make as the plan is placed in operation by American industry. Listening and looking are: William L. Batt, Lt. Gen. Brehon Somervell, Donald Nelson, and Admiral H. L. Vickery.



## FORD MOTORLESS

Ford Motor Co.'s 15-place troop-carrying glider is now in production, but it took four months of preparation (during which time 4,000 tools were designed and built) from the time blueprints were completed to the



day the first ship rolled off the line. The Ford glider, which was designed by Waco Aircraft Co., weighs approximately 3,000 lb. and is nearly as large as a medium bomber. The wings, which have a spread of 84 ft., are constructed of airplane spruce and mahogany plywood; the 52-ft. fuse-

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"This is the final plan," says WPB Vice Chairman Ferdinand Eberstadt of the new Controlled Materials Plan for allocating scarce commodities, "not because it is perfect but because there is limit to human patience."

• **No More 90-Degree Turns**—Leon Henderson still refers to it as the "latest" plan. But human patience is, indeed, limited, and once the massive apparatus of the Controlled Materials Plan, announced this week, comes into operation, further changes are likely to be by way of gradual modification; it's unlikely that any more such 90-degree turns as the present shift from horizontal to vertical material control will be made.

Theoretically, CMP has all the elements necessary to a final controlled war production economy. Yet there are questions. One relates to the division of functions among industry, the armed forces, and WPB. This is a thing that can be modified without fundamentally upsetting the plan. A more serious question is the practicability of handling the vast statistical machine necessary to schedule the entire national economy. **How Much Can Be Done?**—Only experience can answer this second ques-

tion. And what the question really asks is whether a managed economy is a technical possibility or whether, even in wartime, WPB must be satisfied with such approximate controls as those of the Production Requirements Plan. The paper complexities of the Controlled Materials Plan are intrinsic in any thoroughgoing scheme. In a literal sense, CMP should work if any plan will.

Last Spring it became clear that the priority system would break down unless some way were found of limiting the number of outstanding priority ratings to the goods available, and hopes for doing this were staked on PRP (BW-Mar.14'42,p18). It took six months to do the job, but PRP did it. Except perhaps for aluminum, priority ratings issued under PRP in the final quarter of 1942 represent material that is really there.

• **Top-to-Bottom Scheduling**—By the time fourth quarter allocations had been made, however, it had been realized that another element must be pinned down. If the most were to be got out of available materials, if needed goods were not to be tied up in finished goods and in-process inventories, a time relation-

ship must be worked out between the production of parts and of endproducts. Production must be scheduled (BW-Aug.22'42,p17). Orders, instead of asking for 100 tanks quick, must ask for 5 in three months, 10 the next month, and 20 a month from then on. Tank cannon must come through on the same schedule. By the same token, the schedule for tank tread forgings must be 5 this month, 10 next, and 20 in the third month.

Original intention was gradually to build up a system of munitions production schedules alongside PRP, so that PRP itself would eventually become a mere ratification of the schedules. But the quiet reorganization of WPB, which put first Ernest Kanzler and then Eberstadt in charge of material flow, resulted in a changed emphasis. The idea was to push ahead hard with scheduling, and then rely entirely on the schedules to control the materials. This week, industry generally got a look at the details of the scheme.

• **Deciding on the Products**—Fundamental to CMP is a decision by the Army, Navy, Maritime Commission, Lend-Lease, and Board of Economic Warfare (for civil exports) as to what products they want made for them and by whom for each of the 18 months starting with April, 1943. A similar determination on nonmilitary goods is to be made by WPB's Office of Civilian Supply under Leon Henderson. These will be firm decisions as to the first three months, tentative thereafter.

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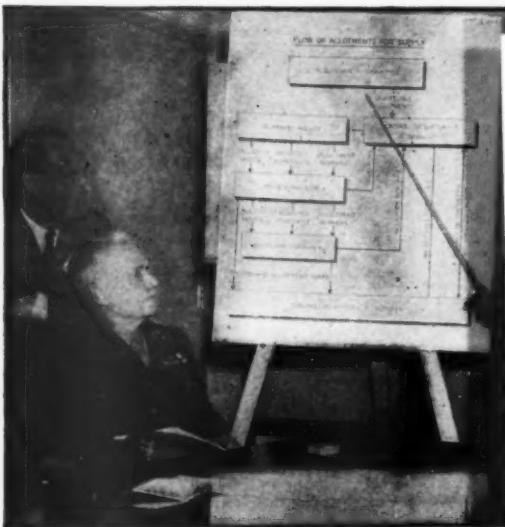
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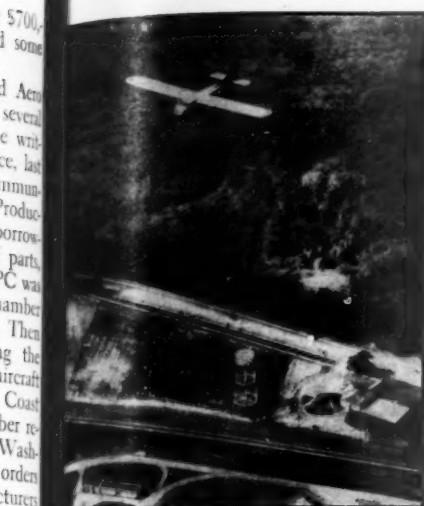


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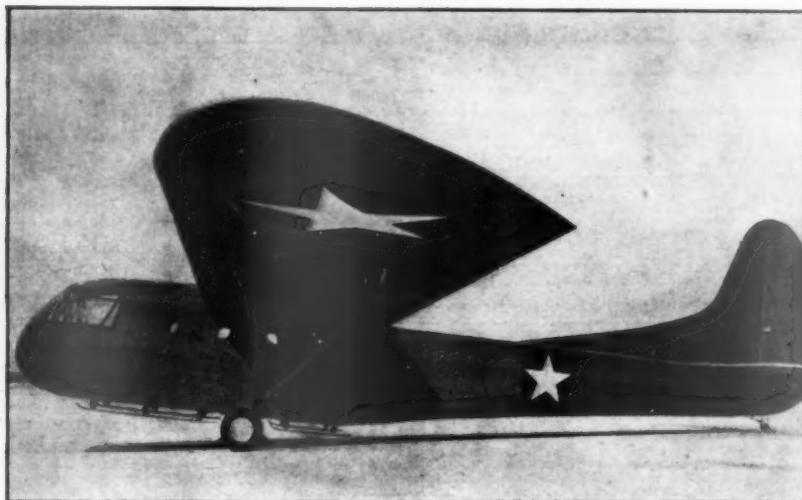
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to the manufacturers of the endproducts, who will be required to report back on the amounts of material that will have to be consumed each month to meet these schedules. The manufacturers will make this computation themselves as regards their own fabrication. Where they buy parts from subsuppliers, they will obtain the information from each subsupplier.

• **Amounts and Deliveries**—The final report will show, for a single complete finished item, the amount of each scarce material that goes into it (including fabrication loss, rejects, etc.), and the "time lead" on the material—the number of months the basic material must be delivered before the delivery of the finished item.

With these reports in hand, each "claimant agency"—Army, Navy, etc.—reduces its production program to a statement of month-by-month consumption of three controlled metals—steel, aluminum, and copper.

• **Metals Are the Thing**—This information and the proposed production programs are turned over to WPB. There the steel, aluminum, and copper branches, the Office of Program Development, and the Requirements Committee pare the programs down to match the anticipated supply of the three metals. Assumption is that if a program is kept within the supplies of steel, aluminum, and copper, it will not often run into other shortages.

Eventually, the plan will probably be extended to cover other materials; rubber is an early candidate. But it is not likely that it will ever have to cover all scarce goods.

• **Agencies Have Some Discretion**—The production programs, after final revision, go back to the claimant agencies. With them go allotments of definite tonnages of the three metals each month for three months. In part, the allotments will be tied to definite production programs. This may be done in aircraft and related items. By and large, the agencies will be free to adjust their programs within the permitted amounts of material.

The agencies then furnish their end-product contractors with month-by-month output schedules and with corresponding month-by-month allotments of all the three metals that enter the product. These prime contractors notify their suppliers of the schedules of parts production they must maintain and divide up their allotments among their suppliers, much as a priority rating is extended under the present system.

• **Advances on Allotments**—Firms having allotments or portions of allotments may place orders for the three metals with any mill they choose, except in so far as WPB has ordered certain mills to concentrate on certain products. The firms will also have priority ratings, which they will use in buying other ma-

terials. To permit long-term scheduling, claimant agencies are allowed to pass out materials for the coming quarter up to 80% of their allotment in the current quarter, to 60% for the following quarter, and 40% for the one after that.

• **Warehouses Considered**—Other significant details of the plan include provision for reporting excessive inventories of the three controlled materials, for maintaining stocks of the materials in warehouses, and for permitting small sales—such as nails to farmers—without allotments.

CMP will not be in full effect for eight months. Preparation of schedules and bills of materials on top-rated military goods such as planes and ships is to begin at once. The second quarter will be a transitional period in which steel, copper, and aluminum will be delivered in accordance with both allotments and priority ratings, though allotments will have higher preference than the priority ratings in order to encourage early compliance with CMP. Some companies probably will be buying part of their materials under CMP, part under PRP.

• **The Final Deadline**—Then, on July 1, deliveries of the three controlled metals will be forbidden except in accordance with allotments.



## LADDERLESS

Wonder what the business agent of a Seattle electrical workers union thought when he discovered a bunch of his boys taking advantage of a practical labor-saving idea? Some bright lad, watching electricians wire barracks at nearby Ft. Lewis, figured that stilts would save at least a thousand steps up and down ladders. The stilts are O.K., say the electricians, even though they make their legs feel funny when they come down to earth.

## Ready on Wages

NWLB prepares to put all its regional offices in shape to handle pay increase requests; treasury acts on salaries.

Procedures for handling the big pay freeze called for by Office of Economic Stabilization's regulations (BW—Oct. 31 '42, p7, p82) were being worked out this week. The Treasury Department, whose Bureau of Internal Revenue will handle salaries over \$5,000 a year (and those under \$5,000 paid to administrative, executive, and professional personnel, is establishing special units for passing on requests for adjustments. At mid-week there was still no announcement of when actual operations would begin.

• **Ready for Applications**—The National War Labor Board, however, whose province is wages and salaries up to \$5,000 (except for the exceptions put under Treasury control), set Nov. 9 as the date when its machinery would be ready to handle employer applications for permission to alter pay scales.

NWLB will operate through Wage-Hour Division offices where employers must inaugurate any action for payroll change. These offices will, by Nov. 9, be prepared to authorize wage increases that are covered by NWLB regulation and handle all requests for exceptions to the general stabilization order.

• **Where to Go for Help**—Regional offices of the Division and the states they cover are:

Maine, New Hampshire, Vermont, Massachusetts, Rhode Island—294 Washington St., Boston.

Connecticut—357 State Office Bldg., Hartford.

New York, New Jersey—341 Ninth Ave., New York City.

Pennsylvania, Delaware—1216 Widener Bldg., Philadelphia.

Virginia, West Virginia, Maryland—215 Richmond Trust Bldg., Richmond.

North Carolina—Salisbury and Edenton St., Raleigh.

Georgia, Florida, South Carolina—244 Peachtree St. N.E., Atlanta.

Alabama, Louisiana, Mississippi—100 Comer Bldg., Birmingham.

Tennessee, Kentucky—509 Medical Arts Bldg., Nashville.

Ohio, Michigan—Main Post Office, Cleveland.

Illinois, Indiana, Wisconsin—1200 Merchandise Mart, Chicago.

Minnesota, North Dakota, South Dakota, Montana—730 Hennepin Bldg., Minneapolis.

Kansas, Nebraska, Iowa, Missouri, Colorado, Wyoming—504 Title and Trust Bldg., Kansas City, Mo.

Texas, Oklahoma, Arkansas, New Mexico—1000 Main St., Dallas.

California, Oregon, Washington, Arizona, Nevada, Idaho, Utah—785 Market St., San Francisco.



Not a man to be pushed around, Economic Director James F. Byrnes emphatically notified members of the Senate Agriculture Committee, "I have never evaded any issue. However, I might not be giving the answers you want."

## No. 1 Stabilizer

**Byrnes's personality gives a good preview of how OES may be expected to tackle the job of combating inflation.**

To fit the popular apprehensions, an economic czar should follow the European pattern. He should be a bulky party whose jaw juts like a Vermont crag, who pounds the desk with a hairy paw, and who explodes orders all over the place. James Francis Byrnes, this country's new home-front dictator, is just the opposite.

• **With a Light Hand**—Since he left the U. S. Supreme Court to become Director of Economic Stabilization, Justice Byrnes has shown that he intends to work with a light hand. This technique agrees with his personality and promises that his campaign against inflation will be carried on without too much disturbance to democratic fixtures.

When an interviewer told Byrnes that he had come down to Washington to see what a czar looked like, the anti-inflation director smiled his tight little smile. "That would amuse my wife, too," he said.

President Roosevelt called upon this old friend to handle the most elusive and complicated job on the entire civilian front. And taxpayers who feared that this meant another swarming, striving war bureau duplicating those already

in operation may put their minds at rest. • **Through Existing Agencies**—"My organization?" repeated Byrnes. "Why, I'm not going to have any organization. I will have only the staff that is right here in my office. It consists of two legal assistants, a secretary, and three stenographers. This means that my plan is to work with and through agencies that already exist. However," he smiled again, "I have friends on The Hill who would very much like to see me create an organization and who would like to help me do it." The last was a sly dig at congressmen who have a hankering for expansive government establishments into which they can insinuate political dependents.

Byrnes explained that he intended to call frequently on other federal personnel. During his long service in Washington he has studied government organization and made friends with important officials. He knows which man to call to get any sort of information in a hurry. He observes that there are all sorts of research bureaus available in the permanent departments and in the emergency war boards.

• **"Mr. Justice"**—Byrnes naturally relishes the honor of having served on the Supreme Court. While, to his cronies in the Senate and other intimates he is "Jim," he likes the rest of the world to call him "Mr. Justice." But there is no judicial severity about his office manners.

"How do you work this thing?" he called to his secretary when a new-fangled telephone switch balked. And

he insisted that his visitor remain seated while he talked with another official on highly important matters.

It is plain that 63-year-old James Francis Byrnes is enjoying himself since he stepped down from the august atmosphere of the Supreme Court into the tumult of common mortals who are trying to win a war. Justice Byrnes, companionable soul that he is, missed his former congressional associations keenly.

It was all right for Senator Byrnes to foregather with Senators Alben Barkley, Happy Chandler, and other friends for an evening songfest. But the idea of black-robed Supreme Court justices harmonizing on the old tunes is too much for anyone outside the theater to suggest. Now that he has left the bench, Byrnes can again add his soul-searching tenor to convivial choruses. His favorites are, "When My Dream Boat Comes Home," "Carolina Moon," "When Irish Eyes Are Smiling."

"And 'Sweet Adeline'?" he was asked.

"No. Not that one," he objected hastily. For "that one" has come to be accepted as a bar-room chant.

• **For Old-Times' Sake**—During his service on the Supreme Court, the legal tedium sometimes became too heavy for Byrnes to endure. On one occasion, a messenger from the Senate was pulled inside the Byrnes office for an hour to talk on personalities and politics. On other occasions, Justice Byrnes sneaked across to the Capitol for visits with friends in the Senate cloakroom.

It is a far cry from the marble magnificence of the Supreme Court building to the modest office of the Director of Economic Stabilization. He and his staff are established in the new East Wing of the White House. This addition is barred to newspaper men and other acceptables of the West Wing. It shelters officials closest to the President, the men who work behind the scenes. To get inside, you must negotiate cobblestones and curbings that are being put in place, not to mention sentries and police.

• **A Single Window**—The Byrnes ground-floor office is small, with a single window. It has venetian blinds, and drawn black curtains attest to night work. An unpainted plywood board keeps the wind from blowing in on the back of Mr. Byrnes's neck. The ceiling shows unplastered concrete, suggesting that this would be a very cozy haven during an air raid. Outside, the view consists of a pile of hollow tile, a temporary fence, and an occasional squirrel of the privileged Washington species that has grown so fat on public handouts that it has forgotten how to bury acorns.

Here Mr. Byrnes rules amiably but with decision. Guardian of his door is Miss Cassie Connor, his secretary. Beyond in a single office are Byrnes's

principal assistants, lawyers Benjamin Cohen and Donald Russell. This is the same Ben Cohen who, as a member of the team of Corcoran & Cohen, figured prominently in nightmares of the New Deal's early enemies. If he ever had a sinister look, Cohen has discarded it under the Byrnes influence. Russell is a member of the Byrnes law firm in Spartanburg, S. C.

• **Policy-Forming**—This predominance of lawyers shows that the Office of Economic Stabilization is going to be policy-forming rather than administrative. It will make decisions and elaborate orders, leaving their application to executive offices. Qualities that fit Byrnes for this many-sided job are his sound judicial habit of digesting the facts of any case fully before making a decision, his instinct for politics, his reasonableness in negotiation, his liking for people, which kindles a reciprocal liking in others.

• **A Hard Core**—Justice Byrnes has given repeated proof that his benignity has a hard core. During his term in the Senate, his suave handling of New Deal legislation endeared him to the White House, but on numerous occasions he kicked over the traces and fought hard against pet Roosevelt measures. Thus he was a leader in the Senate economy bloc when F.D.R. was calling for more and bigger appropriations; he voted to override the President's veto of the soldier bonus; he strove for the repeal of the Administration's undistributed corporate profits tax; he opposed the President's "purge" of 1938.

By his stand on these questions, Byrnes aligned himself with the conservative Southerners who don't stack up too well in the President's book of memories. But Roosevelt's affection and confidence remained so strong that he has shifted "Jimmy" from the best to one of the biggest jobs at his disposal. Since the economic stabilizer must work with many and diverse personalities, it may well turn out that the velvet gentleman from South Carolina was the perfect choice.

• **A "Yes" or "No" Man**—The habit of power acquired on the bench will help Byrnes to blunt "yes" or "no" decisions. To date, he has not flinched, though some very hot potatoes have come his way. Last week he swapped strong language with former colleagues while testifying before an enraged Senate agricultural committee on the President's order requiring federal farm benefits to be taken into account in the fixing of farm prices. Byrnes prefaced the examination by remarking that he had come to answer questions from his old associates in spite of being very busy on his new job.

"Superman, eh?" drawled Senator Burton K. Wheeler, and his tone wasn't altogether honeyed.

• **Sense and Political Savvy**—James

Francis Byrnes isn't impressive physically (he's five ft. seven in. tall), and he makes no claim to superior brilliance of mind or breadth of imagination. He does have a good, broad forehead which contains much common sense and political savvy. His resignation from the Supreme Court was partly because he felt it would be improper to hold on to such an exalted job while serving indefinitely in another, and partly because he heard Justice Frank Murphy criticized for taking time out for his three-month excursion into the Army.

Justice Byrnes was content to leave the Supreme Court's cloistered pomp for a temporary if important post providing more excitement. He hasn't time now to plan for after the war. But a man who knows his way around in politics and has plenty of friends can go places. In Washington there is a saying, "Jimmy Byrnes hasn't an enemy in the world."

## WHERE TO APPLY

Applications for participation in the Manning Table Plan may be obtained by addressing Regional Director, War Manpower Commission, at the address listed below for the region in which your plant is located. The addresses marked with an asterisk are temporary ones. In addition, area offices will be opened within the regions.

**REGION I:** Maine, New Hampshire, Vermont, Connecticut, Rhode Island, Massachusetts  
10 Post Office Square Bldg., Boston\*

**REGION II:** New York  
c/o Social Security Board Office, 11 West 42nd St., New York

**REGION III:** Pennsylvania, Delaware, New Jersey  
750 Suburban Station Bldg., 1617 Pennsylvania Blvd., Philadelphia

**REGION IV:** Maryland, Virginia, West Virginia, Washington, D. C., North Carolina  
c/o NYA, 2145 C St. N. W., Washington, D. C.\*

**REGION V:** Ohio, Kentucky, Michigan  
521 Union Commerce Bldg., Euclid Ave. & E. 9th St., Cleveland

**REGION VI:** Indiana, Illinois, Wisconsin  
c/o Social Security Board Office, 105 West Adams St., Chicago

**REGION VII:** Alabama, Florida, Georgia, Mississippi, South Carolina, Tennessee  
1630 Candler Bldg., Atlanta

**REGION VIII:** Minnesota, Iowa, N. Dakota, S. Dakota, Nebraska  
c/o Social Security Board Office, Midland Bank Bldg., Fourth & Second Sts., Minneapolis

**REGION IX:** Missouri, Arkansas, Kansas, Oklahoma  
414 Dierks Bldg., 1006 Grand Ave., Kansas City, Mo.

**REGION X:** Texas, Louisiana, New Mexico  
P. O. Box 957, Austin, Texas\*

**REGION XI:** Montana, Wyoming, Idaho, Utah, Colorado  
728 Patterson Bldg., Denver\*

**REGION XII:** California, Arizona, Oregon, Washington, Nevada  
245 Furniture Mart Bldg., San Francisco

## Manning Tables

Job and labor inventory for guidance of employers and draft boards is approved by McNutt and Hershey.

The industrial high command in Washington now admits that much bitterness and confusion would have been avoided if allocations and inventories of raw materials could have been prepared early in the war effort. More ominous frictions now threaten in the field of manpower. The Army, the Navy, industry, the farmer, the transport services, even the groggy consumer agencies maneuver for the personnel necessary to meet their several emergencies.

• **Everything on the Record**—In this case a step has been taken which should help protect war industries against the full impact of the manpower crisis. The device is a classification system called Manning Tables, the "manning" referring to employment and not to anyone's name. It provides records by means of which a company can see, among other things, exactly what the draft is apt to do to its working staff, and by which Selective Service may judge how deeply it can cut into any plant personnel without endangering vital war production.

A complete analysis of the plan is carried in the November issue of Factory Management and Maintenance, a McGraw-Hill publication. The report emphasizes the fact that the system is purely voluntary and is as yet in the experimental stage. It carries samples of forms used by companies which cooperated in preliminary tests.

• **"Vulnerability" Guide**—In effect the Manning Tables give industrial management a complete "inventory of personnel," showing who is and is not vulnerable to call by the military services. They also indicate the interval necessary to train new workers to fill gaps in production ranks. By this means a company can project its plans into the future and meet the probabilities as they become fact.

The plan was developed jointly by the War Manpower Commission and the Selective Service System.

Statisticians are fond of saying that the national "labor force is highly expandable," but this wasn't much help to the services responsible respectively for labor to provide war equipment and men to do the fighting. These services knew that our total labor force (including the armed services) had hit the peak of above 58,000,000 and that this fell woefully short of the 62,300,000 minimum expected by December, 1943.

Certain inevitables continued to loom large and ominous: (1) Practically all fit men of military age must enter

the fighting services; (2) replacements for essential industry must be drawn from the available labor reserve; (3) to achieve and sustain needed expansion of production, ironclad regulation of the labor supply will become necessary.

• **What They Show**—Since an inventory is the necessary preface to any practical regulation, the War Manpower Commission and the Selective Service System set to work on plans designed to take a continuing inventory of essential industry's labor needs, while providing simultaneously for withdrawing and replacing workers. Manning Tables were the result. Here briefly is what they do, as described by Factory Management and Maintenance:

Manning Tables provide for listing essential labor personnel according to job classifications—which means a listing of jobs, not men. They facilitate the orderly withdrawal of replaceable workers for the military services in "the inverse order of their essentiality" (which means that the least important go first) and for their replacement from labor reserves with the least possible disturbance to production. They provide a current inventory of manpower needs plus a forecast of future requirements, revealing opportunities for training or upgrading workers, suggesting replacement from the ranks of women, elderly people, the handicapped. They will justify the deferment of essential men in accordance with Selective Service regulations.

• **For Draft Board Use**—A Manning Table is prepared by the employer, and after official O.K. by the regional WMC official, it is turned over to local draft boards to guide them in deferments, etc. The plan is available to

manufacturing companies whose production is 75% or more in war work, and for certain essential industries such as utilities and railroads. To get in on the plan, a company must fill out an application for the nearest regional director of the War Manpower Commission. Approved applicants each receive five copies of the Manning Table with instructions for compiling; industrial groups and trade associations will assist in determining difficult job classifications and in passing upon applicants. A Manning Table is filled out for each plant that a company may have. The company retains one copy, the others going to government services involved.

The Manning Table must be accepted by the State Director of Selective Service of the state in which the plant is located. When an employer has been notified that his table has been accepted, he is authorized to use a "state acceptance stamp" on the special form (42A), which he files with the local draft board for all employees of draft age for whom occupational deferments are considered necessary.

• **Test Companies**—Experimental applications of the plan already have been made in industry. Among the companies cooperating were Carnegie-Illinois Steel Co. working with the American Iron & Steel Institute, General Electric, Eastman Kodak, Bausch & Lomb, Briggs Mfg. Co., American Locomotive, Square D Co.

There are several factors working for and against universal application of the plan. In the first place, the present WMC staff might be swamped by the paper work involved. Then local draft boards might ignore the deferment forms if they were under heavy pres-

sure to produce new quotas. On the other hand, the local boards might welcome the Manning Tables as an official solution to the pulling and hauling that now goes on over "essential men" in industry. Certainly nationwide adoption would give a simple and positive measuring stick.

## "Big Inch" Grows

**But extension of pipeline to East Coast won't plug the many leaks in rationing. Ickes wants a second pipeline.**

Extension of the "big inch" oil pipeline from Texas through Illinois clear to eastern refining centers (see cover) is good news for Coast motorists and fuel oil users, but it won't be moving its 300,000 bbl. of crude a day until midsummer. In the meantime, consumers face a cheerless winter.

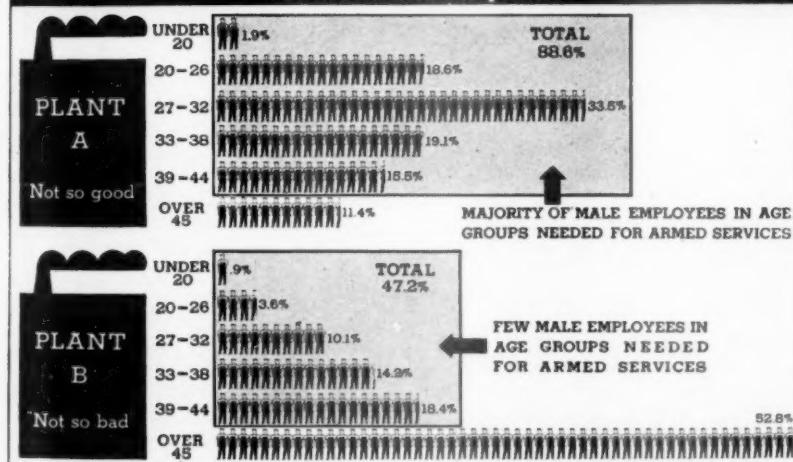
• **New Measures Expected**—Rationing has not kept gasoline consumption down to estimated levels, and fuel oil has not been brought in as fast as anticipated. Now that fuel oil gets first call on transportation facilities and eastern motorists have been toughened up for life under gas rationing, dealers look for more stringent measures, maybe by Christmas, maybe on Jan. 22, the bimonthly "break" period in the ration system. It may be gasless Sundays or reduction in the coupon value (now four gallons) or both.

First, OPA is spurring local ration boards to re-examine all "C" books to see if they have been improperly issued or used. Hundreds have been revoked or scaled down. New rules for "C" books, effective Nov. 22, cut out or cut down rations for salesmen and other categories, confine "C" books to occupational driving considered necessary to the war. Office of Defense Transportation rules for cutting down use of commercial vehicles may have an effect within a few weeks. How much these steps will reduce gasoline consumption in the East is anyone's guess, but they should help some.

• **Cut Doesn't Materialize**—The coupon ration system in the 17 eastern states was designed to cut gasoline consumption to around 430,000 bbl. daily. Instead, use has been consistently higher, in some weeks by 100,000 bbl. or more. How much oil Army and Navy are using in the East is a military secret, but it's plenty. Convoys must be bunkered at Atlantic ports, munitions plants must get fuel, and domestic fuel oil, users can't be cut much further. Any deficiency must be felt in less gasoline for nonessential users.

Minimum essential rationed demand for all petroleum products in the At-

### WHAT MANNING TABLES MAY REVEAL (Based on tests in two plants)



Preparation of "Manning Tables" according to the specifications of the War Manpower Commission and the Selective Service System brings out the vulnerability of a plant's labor force to the draft. Factory Management and Maintenance charted these differences in age groups shown by tests in two plants of the same company. The comment is by WMC.



## MECHANICAL MULES

A "narrow gage" trail tractor (above and right), developed by the U.S. Forest Service for fighting fires in the Pacific Northwest woods, is being adopted by the Army Air Corps for world-wide service. Equipped with straight bulldozer and winch and carried to remote airfields by bomber or glider, it can be used for such jobs as smoothing airfield runways hit by bombs. The Clark Tractor Co., Battle Creek, Mich., is building an "educational" order of 20 units.

The tractor has a width of 37 in. and is 72 in. long with a "bare" weight of 3,400 lb. With a small bulldozer on the front and a hoist in the rear, total weight is 4,200 lb. and over-all

length 10 ft. The gasoline engine turns up 28 brake horsepower at 1,700 r.p.m. Drawbar pull in first gear is 5,000 lb. The tractor has four speeds forward and four in reverse. Top forward is about 8½ miles an hour.

The bulldozer blade, used for punching out roads and firelines, has a novel hinge feature. By adjusting



three pins an operator can use it either as a straight blade or as a V-type blade.

Companion equipment for the midget tractor is a jeep-type truck (right) with a 34½-in. tread, which can haul payloads up to 1,500 lb. and can negotiate trails having a 20% grade. The 30-horsepower motor is suspended

far forward, and the payload is concentrated over the rear axle. This allows the wheels to be close-coupled so that the truck can turn in a 10-foot radius.

The jeep-type truck carries supplies at an average cost of 15¢ per ton mile compared with \$1.50 per ton mile with pack animals. The 10-ton advantage is the result of the truck's greater speed and its ability to maintain a 24-hr. schedule.

Both tractor and truck were born of the necessity for reaching fires quickly in remote forest regions. Standard width truck roads were too costly. The Oregon engineers decided the answer lay in narrow trails which, with the midget tractor, can be built at one-fifth the cost.



lantic Coast Area is estimated at around 1,300,000 bbl. a day. A couple of months ago tank cars were counted on to bring in between 900,000 and 950,000 bbl. daily, with barges, pipelines, and some coastwise tanker movement bringing in the rest.

• **Tank Car Deliveries Drop**—Tank car deliveries averaged around 840,000 bbl. during September, but only about 750,000 during October. The decline was due to bad weather, train wrecks, and necessity of laying up some tank cars for repairs and diversion of others to different traffic on ODT order. Such conditions will continue through the winter. Even the new trainload delivery system and elimination of cross-hauling in the East won't make up for it.

Estimates now are that a daily average of 800,000 bbl. during the winter is the most that can be expected by the eastern states.

• **No Relief in Sight**—So the supply situation is very serious—not only this winter but for the duration. End of the heating season next spring will help gasoline supplies, but even when the new pipeline starts bringing in 300,000 bbl. a day, the situation won't be easy,

because much of this may go right on the boats for England, and a lot of tank cars will have to be used for something else.

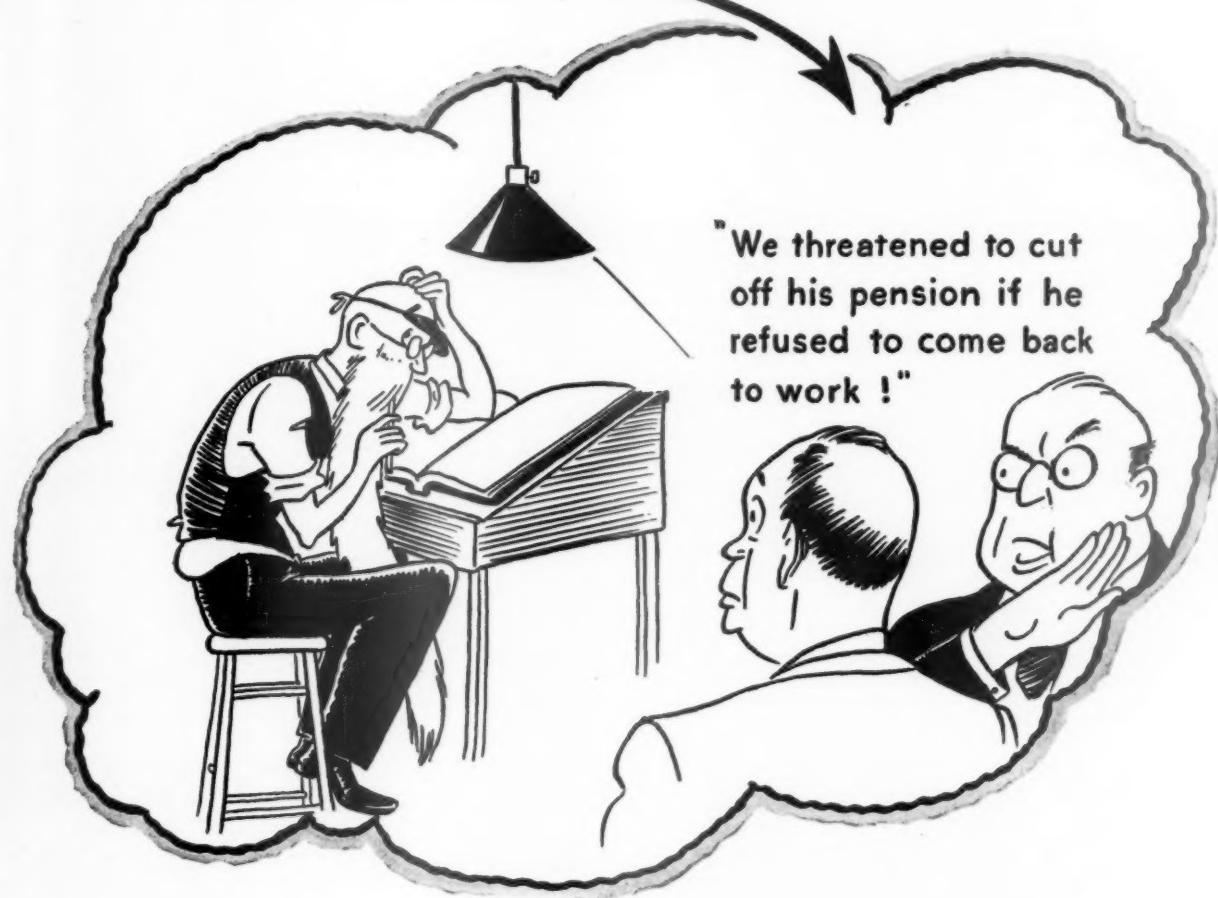
Looking into the future, Petroleum Coordinator Harold L. Ickes isn't satisfied with the mere extension of the Texas-Illinois pipeline to the Philadelphia and New York refineries. He feels it's only a half step toward solving military and necessary civilian oil needs, believes a parallel line will have to be laid. The second artery would carry finished petroleum products from Texas and Oklahoma refineries to eastern consumption and shipping points. High octane gasoline for military aircraft—perhaps for export—would be a major cargo.

• **Nelson Allocates the Steel**—Approval of the Illinois-to-seaboard extension followed lengthy debate as to whether steel could be spared from other war channels. Production Chief Donald M. Nelson cleared the atmosphere when he announced 210,000 to 225,000 tons of piping would be allocated for the 857-mile eastern leg. When completed next month, the west leg will stretch 550 miles from Norris City to Longview, Tex.

As originally blueprinted, the 24-inch Texas-Illinois pipe was to provide a leg-up to overburdened tank car and unreliable tanker deliveries (BW—June 20 '42, p. 14), leaving the railroads to shunt Texas oil eastward. When the extension is completed next June, the transport capacity of a 70-tanker fleet will be handled by the pipeline, and tank car burdens will be lightened considerably. • **Cost \$95,000,000**—The eastern leg will be a 24-inch tube across Indiana and Ohio into Phoenixville, Pa., where smaller feed lines will branch off to Philadelphia and New York. The \$60,000,000 extension will raise total cost of the 1,407-mile pipe to around \$95,000,000. War Emergency Pipeline, Inc. will do the work, using contractors and labor employed on the western leg.

Although Ickes would like to see work started immediately on his parallel project, he realizes the time is not propitious to turn the heat on WPB for further steel allocations. He probably won't let the matter rest after the extension is completed, however, for to him, the question of a second Allied battle front is largely the question of a second pipeline.

# THIS ISN'T NECESSARY



## **YOU CAN RENT COMPTOMETER EQUIPMENT!**

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**ADDING-CALCULATING MACHINES AND METHODS**

# How War Business Is Distributed

Employers still doing national personnel recruiting, firms planning the location of new plants, and merchandisers gaging the relative prosperity of different markets were finding valuable information in the War Manpower Commission's report on labor supply just made public. WMC's information was gathered for the War Production Board, which will use it to guide the Army, Navy,

State	City
Maine	Bangor, Lewiston
Massachusetts	Boston, Fitchburg, Salem, Taunton-Attleboro
New Hampshire	Concord, Manchester, Nashua
Vermont	Burlington
New York	Kingston, Mt. Vernon, New Rochelle, New York City, White Plains, Yonkers
New Jersey	Atlantic City
Pennsylvania	Altoona, Johnstown, Scranton-Wilkes Barre, Washington
Maryland	Cumberland
North Carolina	Asheville, Durham, Greensboro, Rocky Mount, Winston-Salem
Virginia	Danville, Lynchburg, Richmond, Roanoke
West Virginia	Huntington, Parkersburg
Kentucky	Ashland, Lexington, Owensboro, Paducah
Michigan	Benton Harbor-St. Joseph, Iron Mountain, Kalamazoo
Ohio	Cincinnati, Coshocton, Fostoria, Mansfield, Portsmouth, Salem-East Liverpool, Steubenville, Zanesville
Illinois	Aurora, Bloomington, Danville, Galesburg, Peoria, Quincy
Indiana	Kokomo, Lafayette

The second group is a list of areas moderately "overcontracted." WMC tells WPB that these communities are facing labor shortages and should receive no additional

State	City
Connecticut	Norwalk
Massachusetts	Brockton, Fall River-New Bedford, Pittsfield, Worcester
Rhode Island	Providence
New York	Binghamton, Elmira, Syracuse
Delaware	Wilmington
New Jersey	Jersey City, Morristown, Newark-Elizabeth, Paterson-Passaic, Perth Amboy-New Brunswick, Somerville, Trenton
Pennsylvania	Allentown-Bethlehem, Beaver County, Erie, Lancaster, Lebanon, New Castle, Philadelphia-Camden (Pennsylvania-New Jersey), Pittsburgh, Reading, Williamsport, York
North Carolina	Charlotte
Virginia	Bristol
West Virginia	Point Pleasant

The third group lists communities that are definitely "overcontracted." In these places labor shortages are already acute, and WMC warns that further contracts

State	City
Connecticut	Bridgeport, Hartford, Meriden, Middletown, New Britain, Bristol, New Haven, New London, Stamford, Waterbury
Maine	Bath, Portland
Massachusetts	Springfield
New Hampshire	Claremont, Portsmouth
Vermont	Springfield
New York	Buffalo, Massena
Pennsylvania	Berwick, Harrisburg
District of Columbia	Washington
North Carolina	Wilmington
Virginia	Hampton Roads
Michigan	Detroit, Flint, Lansing, Muskegon, Pontiac, Saginaw-Bay City
Ohio	Akron, Canton-Massillon-Alliance, Cleveland, Dayton, Fremont, Sandusky, Sidney-Piqua-Troy, Springfield, Warren-Ravenna

Maritime Commission, and Treasury procurement agencies in their contract letting.

WMC's report breaks down the national labor market into three lists. On the first list are areas where the pool of unemployed assures an adequate labor supply for the handling of any war contracts that may come their way. These territories are:

State	City
Wisconsin	LaCrosse, Oshkosh
Alabama	Birmingham, Montgomery
Florida	Miami
Georgia	Atlanta, Augusta, Columbus, Rome
Mississippi	Jackson, Vicksburg
South Carolina	Columbia, Greenville
Tennessee	Chattanooga, Knoxville, Memphis, Nashville
Iowa	Cedar Rapids, Sioux City
Minnesota	Minneapolis, St. Paul
Nebraska	Lincoln, Omaha
South Dakota	Sioux Falls
Arkansas	Fort Smith
Kansas	Topeka
Missouri	Springfield, St. Joseph
Louisiana	Alexandria, Baton Rouge, Monroe, New Orleans, Shreveport
New Mexico	Albuquerque
Texas	Abilene, Austin, El Paso, Laredo, Lubbock, San Angelo, San Antonio, Wichita Falls
Montana	Billings

war contracts that specify delivery time in less than six months from date of order. In that category are the following territories:

State	City
Michigan	Adrian, Battle Creek, Grand Rapids, Jackson
Ohio	Columbus, Hamilton-Middletown, Lima, Lorain-Elyria, Marion, Toledo, Youngstown-Sharon, (Ohio-Pennsylvania)
Illinois	Chicago, Springfield, Sterling
Indiana	Bloomington, Connersville, South Bend, Terre Haute
Wisconsin	Milwaukee, Racine
Florida	Tampa
Iowa	Des Moines
Missouri	Kansas City (Missouri-Kansas), St. Louis
Oklahoma	Oklahoma City, Tulsa
Texas	Dallas-Fort Worth, Houston, Texarkana, Waco
Colorado	Denver
California	Los Angeles, San Francisco

should not be placed there if it is at all possible to find alternative production facilities. The over-saturated areas are located as follows:

State	City
Illinois	Joliet, Rockford
Indiana	Evansville, Indianapolis, Michigan City
Wisconsin	Clintonville, Manitowoc, Sturgeon Bay
Alabama	Huntsville, Mobile, Talladega
Georgia	Savannah
South Carolina	Charleston
Arkansas	Pine Bluff
Kansas	Wichita
Oklahoma	Choteau
Texas	Beaumont-Port Arthur-Orange
Utah	Ogden, Salt Lake City
Wyoming	Cheyenne
Arizona	Phoenix
California	San Diego
Nevada	Las Vegas
Oregon	Portland
Washington	Seattle-Tacoma-Bremerton, Spokane, Vancouver

# Six things a Service Man should do about his Life Insurance

IF YOU ARE NOW IN the armed forces, or are about to enter the service, we suggest that it may be wise for you to do one or more of the following ...



**1. Be sure that premiums** on your life insurance are paid to date, or paid sufficiently in advance to allow for possible delay in arranging future payments . . . particularly if you intend to keep your life insurance in force through a Government allotment of pay, or through the Soldiers' and Sailors' Civil Relief Act.



**2. Make sure that the beneficiary** designated in your policies is the person to whom you want the insurance proceeds paid. If no beneficiary has been designated, you should consider naming one to avoid the necessity of having an administrator appointed, involving expense and delay.



**3. If your policy provides** for the designation of a contingent beneficiary and one has not been named, it probably will be well to name one. Then, if the original beneficiary happens to die before you do, the proceeds will be payable to the contingent beneficiary without delay.



**4. Give some thought** to the manner in which the insurance money is to be paid to your beneficiary . . . in a lump sum, in a monthly income, or in other installments which can be arranged under your policy. Your agent will advise you as to the various forms of settlement available and how to take advantage of them.



**5. Of course it would be unwise** for you to take your policies with you. Since, however, you might need certain information about your insurance, it is a good idea to keep among your effects a paper listing your policy numbers, types of policies, amount of each policy, amount of premiums, premium-due dates, and the names and addresses of beneficiaries.



**6. Leave your policies** in a safe place, accessible to your family. Instruct the family to consult your agent or your Company if any questions arise. Your nearest Metropolitan agent will be glad to help in connection with your Metropolitan policies. Or write the War Service Insurance Bureau, Metropolitan Life Insurance Co., 1 Madison Avenue, New York City.

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OR AT ANY METROPOLITAN OFFICE**

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## OPA on Rail Rates

**Fortified by terms of new executive order, agency again enters New York fare case, and test of authority looms.**

For the first time last week OPA exercised its brand new authority as watchdog over common carrier rates. In a case before the Interstate Commerce Commission, the price agency intervened in an attempt to keep eleven railroads from getting a 10% boost on commutation rates in New York state.

• **OPA Smacked Down Earlier**—The big question now is: How much weight will OPA intervention carry before the ICC? Making the point doubly significant is a prior motion to dismiss the New York case filed by Leon Henderson several months ago, which the ICC denied without even citing any reasons.

Since that turndown, however, OPA has been fortified with a new delegation of power. By the President's executive order on price-control, OPA is designated "to receive notices of increases in common carrier or other public utility rates and charges, with authority to issue appropriate regulations for the receipt of such notices and to intervene and participate before federal, state, and municipal authorities in connection with proposed increases in such rates and charges . . ."

• **Details of the Case**—Thus strengthened, OPA has jumped into the New York case for a second time. Here's what the shooting is about:

Last spring the ICC granted the eleven railroads involved in the current affair—including such bigsters as the New York Central, B. & O., and Pennsylvania—a 10% increase in interstate passenger fares. Thereupon the roads petitioned the New York State Public Service Commission to grant a similar boost on intrastate commutation traffic. This request was promptly turned down. So the roads came back to the ICC, asking that the Public Service Commission be overruled on the grounds that its attitude was discriminatory.

In August, acting on his own behalf, the Price Administrator got mixed up in the doings when he filed a motion for indefinite postponement or dismissal of the proceeding, alleging that the cost of living was affected. This petition came to naught, but inasmuch as the case has remained open, OPA is going to bat a second time.

• **OPA's Chances Look Better**—What the outcome of this inning will be, nobody knows, of course. But it stands to reason that OPA is packing much more power, and may become a big factor in wartime rate-making.

OPA has been tuning up for this role

for about a year. Long ago it instituted a "watching service" at the ICC, thereby kept its eye on every petition for a tariff change. In some 40 instances, the price agency filed a protest, claiming the cost of living would be influenced adversely. In better than 20 of these cases, the proposed rates were suspended.

• **Voluntary Actions**—Meantime OPA worked out friendly agreements with rail and motor rate bureaus for voluntary rate reductions. Thus, in the case of sugar and molasses, for instance, cooperation brought about lower tariffs.

Considerable speculation is currently being devoted to the possible entrance of Thurman Arnold into this picture. Arnold recently cranked up a tremendous antitrust action against the common carriers only to find a spearhead of governmental opposition—led, presumably, by WPB—allied against him. Under these circumstances, the antitrust suit will very likely go into limbo (BW—Oct. 31 '42, p7), which leaves Arnold no alternative except to needle the common carriers from another direction. One method would be to protest every important tariff increase, alleging that the proposal originated in supposedly illegal rate-making machinery. And if such protests could be tied to OPA interventions, the common carriers would indeed be under heavy fire.

The possibilities of this pincer movement cannot be evaluated at the moment. On the other hand, the seeds of coalition have definitely been planted.



NEMA'S NEW PRESIDENT

New president of the National Electrical Manufacturers Assn., Max McGraw, president of McGraw Electric Co., Chicago, inherits NEMA's current problems: production, priorities, postwar planning.

## Hotshots Flagged

**Fast passenger trains may have to trim speed to conserve equipment and give war freight a clear track.**

Simmering on the stove, with good prospects of coming to a boil soon, is the question of slowing down schedules of fast passenger trains. In pushing for slower running times, the Office of Defense Transportation is seeking to make tracks, equipment, and motive power last longer and reduce maintenance. Other purposes are to permit present trains to serve more communities by making more stops, and to prevent sidetracking freights and other passenger trains to let the hotshots through.

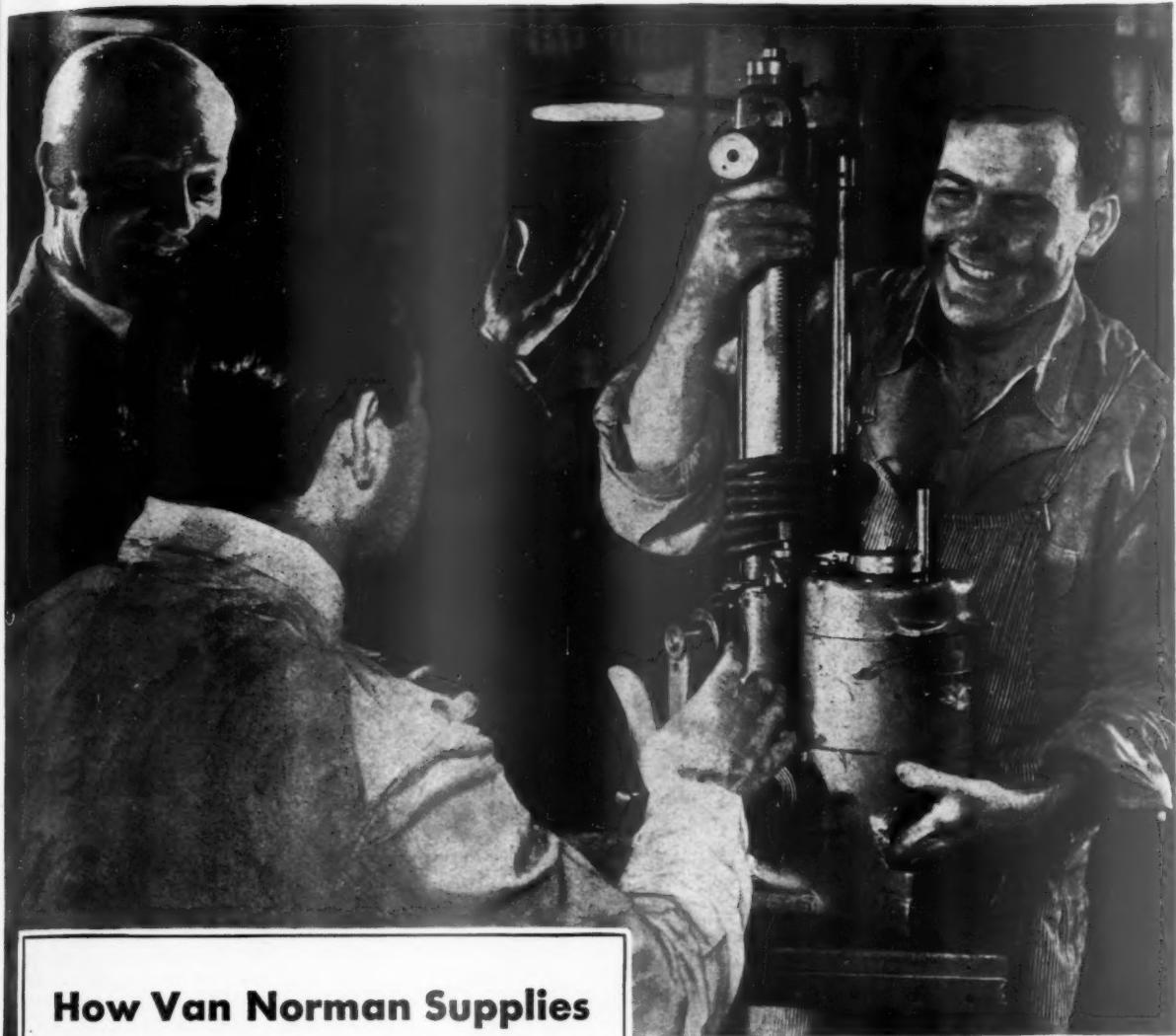
• **Western Lines Affected**—Nobody is talking much about it in public, lest what he says be used against him. General outlines of the proposal are most clearly visible as affecting the western lines. Twin Cities-Chicago streamliner service, now to 6½ hours, would be slowed to 8 hours. The 17-hour running time of the two speedsters between Chicago and Denver (16 hours until four months ago) would become 20 hours.

Trains from Chicago to the Pacific Coast would slow down, the standard-equipment trains from around 60 hours to 62-64 hours, while high-speed streamliners, which dropped from 39½ hours to 41½ hours last June, would add a couple hours.

• **Eastern Runs Doubtful**—Just what would happen to New York-Chicago service is problematical. A few days ago, it looked as if the fastest allowable time would be set at 20 hours. Now the talk is of 18 hours. Present running time of the extra-fare Twentieth Century Limited and the Broadway Limited is 16 hours, of the General and the Commodore, 17 hours.

Between the Middle West and the South and Southeast, the facts are less obscure. The Illinois Central, with the only direct Chicago-New Orleans service, early last month extended by from five minutes to an hour the running time of every long-distance passenger train on its lines, excepting only its three streamliners which run between Chicago and, respectively, New Orleans, St. Louis, and Miami. Only through sleepers now operated between Chicago and New Orleans are on the Panama Limited, from which the excess fare was removed at the same time.

• **Winter Plan Scrapped**—I. C., the Pennsylvania, and the Chicago & Eastern Illinois have been planning to resume last winter's through Pullman service on a daily schedule of 33 hours, Chicago to Miami, with each road run-



## How Van Norman Supplies an Industry's Needs... without Selling a Single Machine

WPB says: "Your Re-Distribution Plan . . . which results in moving idle service shop equipment from places where it is not needed into places where it will be put to work . . . is of direct benefit to the War Effort." Today, Van Norman's Automotive Equipment Division has hundreds of listings of idle machines of all makes sent in from all over the country. These listings are given to automotive wholesalers, who see that the equipment is placed where it will do the most good . . . in helping to win the war by increasing war-plant production or

getting more trucks and busses back into service sooner.

It has been months since Van Norman has sold anything to this vital home industry . . . for every Van Norman automotive service machine is now headed for active duty with the Armed Forces, as fast as they roll out. But Van Norman has always gone on the idea that there is far more to business than selling . . . and this special wartime service came naturally from that kind of thinking. . . . Anyone who is interested will be sent, for the asking, the whole story of the Equipment Re-Distribution Plan . . . one side of Van Norman's War Effort.

**VAN NORMAN**

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## Wire Rope smooths the road to war

At best, the figurative road to war is rough. In the literal sense, however, America's highways... her airport runways... her military bases of all kinds are smoother than ever before. Yellow Strand *Preformed* Wire Rope helps to make them so. On the equipment of suppliers and contractors handling rock, sand, cement and concrete, it speeds construction of pavement that can stand up under ceaseless pounding.

Veteran wire rope users agree that *Preformed* Yellow Strand provides smoothness of another sort. It levels out production

bumps by delivering longer service between replacements. The flexibility imparted by preforming and the durability contributed by Yellow Strand's drawn-to-order steel wires combine to produce a rope that may outlast two of lesser grade. Every shovel, derrick or other machine thus equipped saves steel that the nation urgently needs.

No substitute can replace wire rope on certain heavy-duty jobs. So... give your rope good care; keep it working. Any B & B branch or distributor will join you in extracting its full capacity.

**Broderick & Bascom Rope Co., St. Louis**

Branches: New York, Chicago, Houston, Portland, Seattle. Factories: St. Louis, Seattle, Peoria

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STRAND**  
**PREFORMED WIRE ROPE**

A Mainstay of War Production, Through Its Service to  
ROAD BUILDERS • GENERAL CONTRACTORS • QUARRY OPERATORS • MINERS  
PLANT ENGINEERS • ROTARY DRILLERS • LOGGERS and OTHER INDUSTRIAL SERVANTS



ning a train every third day. Because seasonal trains are now prohibited, this set of plans has been suspended.

However, the sponsoring roads are prepared to argue that operating extra sections of regular trains to care for the traffic would use more car miles than would be required for the faster running times of the seasonal sleeper trains.

• **Pro and Con**—In general, railroad executives are divided on the subject of slower schedules. One group, schooled in a lifetime of ever-faster operations, is dead set against the idea. Another group believes it is probably the right thing to do in wartime.

Most is being heard from the antis. Many claim that the idea may be all right as a general policy, but it just won't work on their roads. Turn-around times are the bone of contention. The three Chicago-Twin Cities roads are vigorously objecting to an eight-hour speed limit on their daytime trains.

• **Cleaning Time Needed**—The Burlington runs two Zephyrs daily in each direction, getting a round trip out of each train, with barely enough time in terminal between runs to clean the cars and service the Diesel-electric locomotive. Longer running times would necessitate earlier departures for the morning trains (now 9 a.m.) and later arrivals for the afternoon trains (10:30 p.m.)—and there is some question whether travelers would not rather travel overnight than have their sleep shortchanged by such schedules.

The Chicago & North Western and the Chicago, Milwaukee, St. Paul & Pacific run their high-speed engines by day on their streamlined 400 and Hiawatha, turn these engines around in a few minutes and use them to haul heavy sleeper trains back the same night. Lengthening the schedules of these day trains might prevent adequate shop time for engines between runs. The same general arguments are used about the Denver-Chicago trains and the Pacific Coast streamliners.

## Only 35 m.p.h.?

War Department launches survey as present limitation is challenged as impracticable for operation of trucks and buses.

The highway advisory committee of the War Department is beginning a survey to see whether the 35-mile-an-hour maximum regulation for trucks and buses should be continued.

• **A Challenge**—The limitation has been challenged on the basis that increased engine speed is necessary in many trucks, due to inability to use overdrive installations at a 35-mile ceiling; also that in the present scarcity of transportation fa-

cilities, the slowdown of the road speeds actually tightens the shortage. On the other hand, there is general agreement that the lower speed conserves tire wear, dominant reason for the order.

One member of the advisory committee, State Highway Commissioner G. Donald Kennedy of Michigan, declared that the great majority of trucks and buses are designed today to operate most efficiently at 48 to 50 miles per hour.

• **Exemption Held Unlikely**—Kennedy added, however, that it was unlikely that an exemption from the general 35-mile regulation would be made available to the commercial vehicles, because of enlarged traffic hazards. "We must seek another solution," he said.

Another Michigan complaint against the regulation came from William Palmer, secretary of the Michigan Petroleum Industries Committee. He said some trucks, unable to get into high gear at 35 miles an hour, would need changed gear ratios—but were unable to obtain new gears because the alloy steels required are so scarce.

## Safety on the Job

Occupational deaths are up but not in proportion to new hazards, members of national congress decide.

As plant safety men packed their bags to attend last week's National Safety Congress in Chicago, they cringed at an ominous announcement from the Secretary of Labor. Since Pearl Harbor, declared Miss Perkins, more than 15,000 American workers had lost their lives in occupational accidents. She called on the nation to "stop this mounting toll of industrial deaths and disabilities."

• **Not So Bad After All**—When they reached the convention, looked over the preliminary statistics, and talked things over with their fellows, the realization came to the nation's professional accident preventers that, bad as are 15,000 occupational deaths, this figure is ever-so-much-better than had been expected for 1942. Some of the boys even began to strut a bit.

Nobody knew last winter, as the nation's war production program shifted into high gear, just how bad the industrial accident experience would be; everyone agreed it would be pretty bad. New plants and expanded plants with new workers, safety specialists and supervision spread thin, pressure for more and faster output, overtime—these added up to a nasty accident potential.

• **Stories in the Ratios**—Occupational deaths are a trustworthy index of total industrial accidents. They run in an



## Swifter Driving • Reduced Effort • Less Spoilage = 50% Less Assembly Time with Phillips Screws

It takes less time to get more done with Phillips Recessed Head Screws, and assembly workers don't wear out as the day progresses.

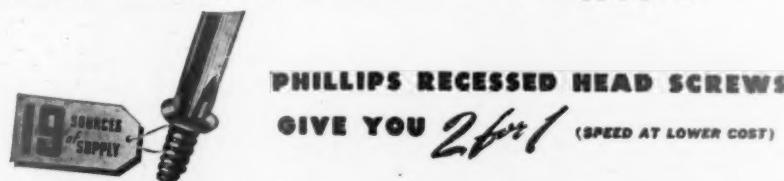
Phillips Screws permit one-hand starting and driving. The screw clings to the driver in almost any position — no fumbling — no slipping — no crooked driving. One hand is always free to steady the work. And, with the slipping driver hazard eliminated, electric and

pneumatic power drivers are more often practical.

That isn't all! Less fatigue . . . fewer accidents . . . better work — even from inexperienced operators.

All this adds up to 50% savings — in time, which is so vital today — and cost, which will be a problem again tomorrow.

Any of the firms listed below will supply you.



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The Bristol Co., Waterbury, Conn.  
Central Screw Co., Chicago, Ill.  
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Continental Screw Co., New Bedford, Mass.  
The Corbin Screw Corp., New Britain, Conn.  
International Screw Co., Detroit, Mich.  
The Lamson & Sessions Co., Cleveland, Ohio  
The National Screw & Mfg. Co., Cleveland, Ohio  
Whitney Screw Corp., Nashua, N.H.

New England Screw Co., Keene, N.H.  
The Charles Parker Co., Meriden, Conn.  
Parker-Kalon Corp., New York, N.Y.  
Pawtucket Screw Co., Pawtucket, R.I.  
Phoell Manufacturing Co., Chicago, Ill.  
Russell, Burdsall & Ward Bolt & Nut Co., Port Chester, N.Y.  
Seevill Manufacturing Co., Waterbury, Conn.  
Shakaproof Inc., Chicago, Ill.  
The Southington Hardware Mfg. Co., Southington, Conn.  
Whitney Screw Corp., Nashua, N.H.

**JACOBS**  
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STATION PENNSYLVANIA, ILLINOIS

approximately constant proportion of one death to 80 or 100 disabling accidents. Actually, occupational deaths for the first seven months of 1942 were up 11% from the same period of 1941, and for July were up 17% from a year earlier. These percentages doubtless exceed the relative increase in total employment, hence constitute an increase in the accident frequency rate.

What tempers this statistically is the shift in occupations which has meanwhile occurred. A salesman in a department store or a pants presser in a clothing factory is less exposed during working hours to disabling or fatal accident than is a steam hammerman, a shipfitter, or a grinder. Employment has greatly increased in the heavy industries, which are inherently of a hazardous order—though energetic accident prevention work has in many such plants reduced the hazards to a mere fraction of what they were.

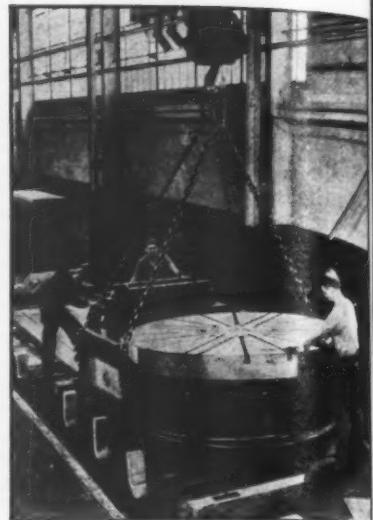
• **Looking at the Record**—The National Safety Council, fountainhead of accident prevention, is certain that the vigorous effort of industry is the big reason why the current industrial accident experience is not running worse than it is. The council also inclines to the view that the cumulative effect of safety education carried on for 25 years was underestimated even by the most devoted missionaries of the movement.

Since World War I, progressive industrial management has learned to accept safety work as a matter of course. Big war contractors such as Bethlehem and Pullman were already adept at taking the accidents out of heavy-industry operations, and outfits such as Quaker Oats and Procter & Gamble were quick to adapt their existing mass-production safety know-how to the war plants they are managing for the government. Thousands of plants have been surveyed and equipped with machine guards and other mechanical devices, which have become standard in their industries.

• **Workers Schooled in Safety**—Millions of rank-and-file factory men of the present middle-aged group have been so indoctrinated during their working lifetimes that they accept the safe way as the only way. Their families, getting their own first plant jobs, are just as matter-of-fact about safety.

Heavy emphasis at the safety congress was on reducing off-the-job accidents to industrial workers. These out-of-hours accidents, principally classified as motor vehicle and home, exceed on-the-job accidents—usually in a proportion around 1.5 or 1.75 to 1. Some highly developed safety departments, such as General Electric, Western Electric, and Swift, have for years dinned into the ears of their people that it hurts just as much to get bunged up elsewhere as in the factory.

Consequence of an intelligent educa-



### TANK TOOLS

In addition to building machine tools for its own tank arsenal, Fisher Body Division of General Motors Corp. is now regularly producing vertical boring mills, planers, and drills for several other tank manufacturers. One vertical boring mill is so large that two freight cars are required to carry it.

tional job along this line has generally been a substantial reduction in off-the-job accidents. Now, as the country approaches total employment, the cost of manpower loss due to accidents becomes unmistakable, and employers are more easily convinced that it pays to keep their workers physically intact throughout the 24 hours.

• **Few Motor Fatalities**—The decrease in motor vehicle deaths is regarded as hopeful. For the first eight months, 1942 was 21% below 1941; August was down 40%. Motor vehicle deaths per 100 million miles are down 9% for the first seven months. Yet, because war plant workers are driving more than their pro rata mileage, total motor vehicle deaths among industrial workers will not decrease as much as the over-all national average.

Helping to boost safety work both on and off the job is the War Production Fund to Conserve Manpower (BW-Jul.4'42,p19). Heading for \$5,000,000 for use during this year and next, War Production Fund has already sweetened the National Safety Council's 1942 budget.

So the Council is spreading out into motion picture and radio work, is expanding its existing departments as rapidly as it can find qualified personnel. This is a tough task, since good safety men are today in such demand that they can get jobs practically at will, often at salaries higher than ever before.

# How Army Did It

**Handling of evacuation of 110,000 Japanese, a large-scale management job, has evoked the interest of Coast executives.**

As an example of how the Army handles a large-scale civilian management job, Pacific Coast executives were discussing this week with considerable admiration details of the evacuation of 110,000 Japanese from coast military zones to the ten permanent inland relocation centers.

• **Speed and Efficiency**—There appeared to be no question but that the Army, through the Wartime Civil Control Administration, had performed a huge, complicated, and delicate management operation with speed, efficiency, and humaneness, and all things considered, at a surprisingly low cost.

Now that Lt. Gen. John L. DeWitt, commanding general of the Fourth Army and Western Defense Command, has announced arrival of the last batch of evacuees in the permanent center to be supervised for the duration by the War Relocation Authority, many of the details can be revealed.

• **Three Big Tasks**—The organization set up by Lt. Gen. DeWitt some eight months ago had three all-important jobs: (1) to get the 110,000 Japanese, two-thirds of them American citizens, out of the strategic areas along the coast; (2) to protect the lives and property of the evacuee; and (3) to provide food, clothing, shelter, medical care, recreation, and schooling for their charges while moving them, first, to some 18 temporary assembly centers in the three coast states, then, to the ten permanent relocation centers where the W.R.A. would take over (BW-Jul. 18 '42, p18).

All this had to be done with the least amount of disturbance to the agricultural and business economy of the West Coast. (Impressive example of how well the last phase of the job was done is that W.C.C.A., with cooperation of the Farm Security Administration, has placed owners or tenants on 99.5% of the farms formerly owned or operated by the Japanese.)

• **Administrative Setup**—Working under Col. Karl P. Bendetsen, 34-year-old head of W.C.C.A., assigned by Lieut. Gen. DeWitt to supervise the entire job, was an administrative staff of 45 Army officers and 275 civilians. A dozen or so federal agencies assigned small groups to work with W.C.C.A. on special phases of the evacuation.

The San Francisco Federal Reserve Bank helped the Japanese dispose of, or store, their property (even supervising details of sales transactions); the Cen-

sus Bureau told W.C.C.A. how many Japanese resided in a given area, how many women and children there were, etc. On the basis of this information, the movement of evacuees inland was planned so that transportation, housing, food, and medical care were available when and where needed.

• **Even Feeding Formulas**—The Office for Emergency Management hired and paid all civilian employees, provided office space and equipment for the San Francisco headquarters and regional offices. U. S. Army engineers provided the housing facilities, constructing barracks for 110,000 Japanese in the 18 assembly centers in four weeks. The Public Health Service supervised medical and hospital details, even supplied feeding formulas required by the babies.

W.C.C.A. initiated, coordinated, and checked the work of all participating agencies through a half dozen departments. An operations division, for instance, planned and handled actual movement of evacuees and looked after their welfare while they were in the assembly centers. A Property, Security, and Regulations Department trained and supervised civilian police on duty inside the centers, watched for subversive activity, and had charge of disposal of evacuees' property (details were handled by the Federal Reserve Bank). A fiscal branch functioned as a comptroller and did the bookkeeping.

• **Trouble Shooters**—A staff of trouble shooters functioned like motorcycle policemen at a parade, spotting and reporting the thousand and one inefficiencies that arose to hamper progress of the great trek. (All assembly centers were connected by teletype with headquarters in San Francisco, which, in turn, had teletype contact with

Army Headquarters, Federal Bureau of Investigation, etc.)

A large statistical division anticipated factual requirements of the program, prepared maps, tabulations, and reports. A public relations staff had the delicate job of interpreting to the sometimes apprehensive public (and the Japanese) what was going on.

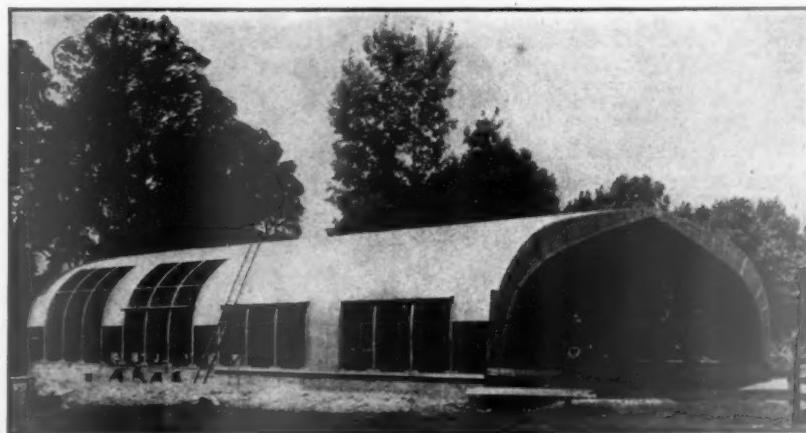
Last week, W.C.C.A. totaled figures, which showed that average per capita daily cost of operating the assembly centers ran from 25¢ (at Salinas, Calif.) to 73¢ (at Mayer, Arizona). Per capita cost of constructing the centers ran from \$64 (in Puyallup, Wash.) to \$196 (at Pomona, Calif.).

## Wheat Hybrid

**Cornell develops white wheat of better yield which offers a challenge to Yorkman's supremacy in pastry field.**

After five years of experimentation, selective breeding, and field tests, the plant breeding department of Cornell University has achieved a soft, white wheat, expected to supersede Yorkman wheat in the pastry-flour field.

• **Yield Tops Yorkman**—As yet unnamed, the new wheat is tagged Hybrid 595. It is claimed for 595 that it has a slightly better yield than Yorkman, that it is winter-resistant, has better straw quality, better loose smut resistance, and that it makes as good or better pastry flour than the present type. In tests covering five years at Ithaca, N. Y., 595 has yielded an average of about 4 bu. per acre better than Yorkman,

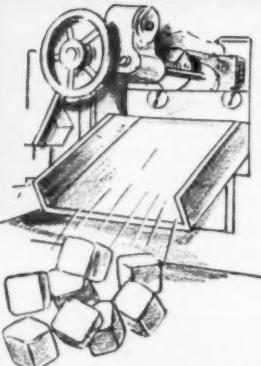
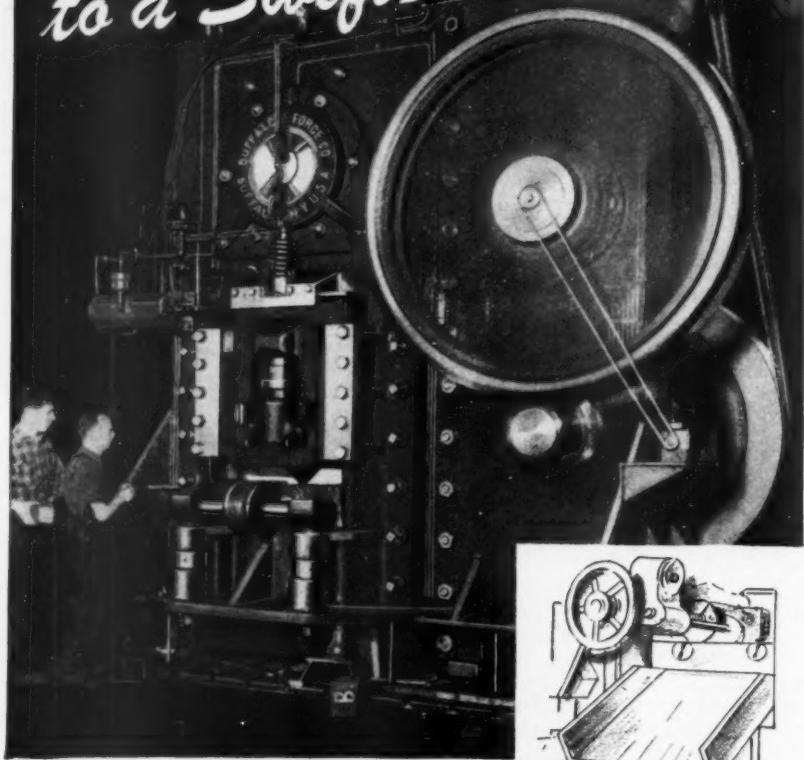


PLANE "GARAGE"

As plywood gains in importance as a construction material for training, cargo, and even bombing planes, Marine Air Research Corp., Annapolis, finds another use for plywood by

the aviation industry—prefabricated plywood hangars for small aircraft. Advantages claimed for the new type hangar, which has laminated arches for structural strength, is erection speed and low cost. The above model is 68 ft. long, 40 ft. wide (clear span).

# DEDICATED to a Swifter Victory



**8 A MINUTE!**  
*That's the rate this giant  
shear cuts billets for husky shells*

This mammoth Buffalo Billet Shear typifies Industry's determination to win—and win fast. At a fast clip—with knives under a pressure of  $3\frac{1}{2}$  million pounds—this Buffalo Shear cuts off alloy steel billets for Victory shells. It's a tough assignment, yet the massive construction and simplicity of operation of the Buffalo Shear makes easy, accurate work of it... Here is but one of many Buffalo Forge contributions to back up America's armed forces.

★ ★ ★



**BUFFALO FORGE COMPANY**  
458 BROADWAY

Branch Engineering Offices in Principal Cities

CANADIAN BLOWER & FORGE CO., LTD., KITCHENER, ONT.

which had topped anything ever seen before in the soft wheat field with yields of up to 60 and 64 bu. per acre.

Some 250 bu. of certified 595 seed were distributed this year to be planted in about 200 acres on certified seed farm. Sown a bushel and a peck per acre, 595 is expected to yield at least 6,000—maybe 8,000—bu. of cleaned seed for unrestricted distribution by the next planting season.

• **Stiff Stalks Important**—The excellent straw quality of the new wheat is one of its foremost features since stiff stalks are one of the primary requisites of good winter wheat. Its resistance to loose smut is also important because, although seed treatment prevents covered smut, resistance to the loose type of mildew must be bred into a grain.

Also on the docket for 595, should its future be as bright as its present prospects, are extensive use in the cracker and piecrust fields, a demand for some 1,500,000 bu. a year for shredded wheat products, and a large consumption in the wholewheat industry.

## Materiel Index

WPB clears the decks for manufacturers eager to get into war goods production by listing machines with needed items.

WPB regional headquarters in New York has come forward with one answer to the yelps emanating from that city (BW-Jul. 18 '42, p35) and other areas suffering from a lack of war contracts.

• **List 300 Items**—It has made available to manufacturers of light products the industry operations charts originally prepared for WPB engineers in their study of peacetime-to-wartime plant conversions. Four charts, listing more than 300 items that the armed forces need and that the needleworking, woodworking, plastic, and leather and canvas goods industries can produce, are available at regional and district WPB offices.

What has aroused an eager response, not only from prospective war goods suppliers but from other regional and district WPB offices as well, is the intersecting tabulation of basic machine operations involved in the production of each item.

• **May Be Subcontractor**—This enables the manufacturer, often exploring strange waters, to determine at a glance which of the items his plant is geared to produce. Or, lacking the equipment to turn out a finished product, he may discover he is able to contribute one of several processes to an item and thus get into the war program as a subcontractor.

A fifth chart, due for release this week, covers gage-making machine operations to meet ordnance requirements.

## No Labor Draft

Not now anyway, so other pressure devices will be tried. Some will pinch hard, but there is a tangle on powers.

War Manpower Commissioner Paul McNutt is taking a beating. The President's decision not to press now for national service (labor-draft) legislation exposes McNutt to the steady attrition of his functions. Legislation giving him clear authority to deal with manpower problems, whether or not he actually had to use any compulsory powers, would have prevented the gradual seeping away of his job into the hands of agencies such as WPB and Selective Service.

But in the face of labor opposition and a rather queasy Congress, Roosevelt has, for the moment, decided to let new legislation wait for at least a few months.

• Stopping Pirating—McNutt, finally convinced that he won't get his law immediately, is now getting ready to give a trial to the multitude of non-statutory measures available to him. One thing he can do within his own family is to require that all employers, or at least all war employers, do their hiring through the U. S. Employment Service, an agency close to McNutt's heart. A White House order to this effect is due

to be promulgated within a few weeks.

This move will immediately put a considerable crimp into labor-pirating. Simply by refusing clearance to unjustified transfers of men from one war plant to another, USES can end open pirating. It will, of course, be pretty hard to prevent employers from sneaking a shanghaied worker in the back door now and then.

• Selective Service Best Weapon—To an extent, USES can also force employment of local labor, women, negroes, and aliens by refusing to certify any one else. This can only be carried so far, however, because if the employer is stubborn enough the contracting agency involved—Army, Navy, Maritime Commission—will start squawking that production is being delayed by USES inflexibility. If McNutt had legislation, he figures, he could enforce sanctions on the employer.

To go much deeper into manpower control, the commissioner must turn to agencies over which he has only rather formal control; to get a concrete man-by-man control over labor pirating, he must use the Selective Service, as in last month's order freezing dairy, live-stock, and chicken labor to the job. Under this order, workers with dependents are classified 3-B; those without, 2-B. Any man liable to draft who left his job except for a similar one would be automatically reclassified 3-A or 1-A, with an early or immediate prospect of being drafted.

Even harder to handle, except



### LABOR GOES TO COLLEGE

Fourteen A.F.L. and C.I.O. unionists, who are studying at Harvard this year, were chosen by their respective organizations for qualities of leadership

and intelligence. The Harvard stay is being financed by their unions and by friends of the University. Their first big adjustment is learning to think of everyday, bread-and-butter labor problems in objective, scientific terms.

5 Reasons Why We Measure Our Valuable Stored Liquids  
With  
**LIQUIDOMETER** Tank Gauges  
"THEY'RE ALWAYS DEPENDABLE"

- 1 100% automatic.
- 2 No pumps, valves, or auxiliary units needed to read them.
- 3 Models available so that readings can be taken remotely from or directly at the tank.
- 4 Accuracy unaffected by specific gravity of tank liquid.

5 Approved for gauging hazardous liquids by Underwriters' Laboratories and similar groups.

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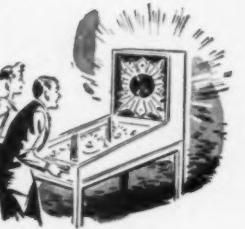
## New tradition:

24 new advertisers started their '43 schedules in October '42 . . . in Business Week . . . seeing no reason to delay BW's effectiveness! 24 in such varied fields as

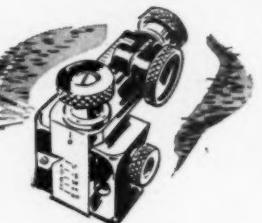
Railroading  
Films  
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Fences  
Machine Tools  
Insurance  
Conveyors  
Air Transport  
Electronics  
Chemicals  
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Elevators  
Motors  
Building Materials  
Office Equipment



# YESTERDAY PINBALL MACHINES



# TODAY GUNSIGHTS



# TOMORROW?

WOULD you make a bet today on what your plant may be making after the ink and sealing wax are dry on the peace treaties?

It's a realistic question...and need not interfere with today's war work. Maybe you will go back to pre-war products. Possibly to something entirely different. There will be new ideas, new products, new needs, new emergencies...and much more of certain staples to feed and clothe and house millions of people who will be out of almost everything. A market more competitive than any you have ever known!

In many plants Taylor Instruments will be an integral part of the blue prints because Taylor Instruments and Control Systems have already been designed to do today's work

and to meet the production demands of tomorrow. They are made to serve you accurately for a long, long period. They are flexible in their application to many different jobs. Their adaptability, their interchangeability of parts, their precision action, their economy in operation are an everlasting delight to operating engineers and production superintendents in any plant.

Include Taylor Control in your plans for tomorrow's products. Make a date with your Taylor Field Engineer. He can help your Post-War Planning Committee. And he can help you increase war production right now! Taylor Instrument Companies, Rochester, N.Y., and Toronto, Canada. *Makers of instruments to indicate, record and control temperatures, pressure, humidity, flow and liquid level.*

#### TO AMERICANS ON THE HOME FRONT:

*Taylor Household Thermometers and Weather Instruments have enlisted for the duration. Most stores still have stocks on hand. If yours hasn't, remember—Taylor's war experience will bring you even better instruments later!*

BUY U. S. WAR SAVINGS  
BONDS AND STAMPS

**Taylor Instruments**  
MEAN  
**ACCURACY FIRST**

IN HOME AND INDUSTRY

through other agencies, is the problem of inducing men with nonessential jobs to move into war jobs. Selective Service has been providing a push in this direction ever since it started dividing married men into 3-A's and 3-B's, according to whether they were in nonessential or essential jobs. A 2-A man is on notice that he will be called before his 2-B brother.

• **Concentration Helps Out**—A more drastic approach would be for WPB to force men loose from unimportant jobs by shutting down or restricting the operations of industries unimportant to the war. Nearest approach to this so far was in the concentration of the stove industry (BW-Oct. 31 '42, p16), where WPB shut down the plants in labor-shortage areas and let the other small plants run. Labor conservation is more of a factor in the case of the wallpaper industry, on which WPB is now debating whether to concentrate or slash horizontally. The industry favors the slash; McNutt's commission is arguing for concentration.

Big difficulty with this sort of non-statutory manpower program is the synchronization of the activities of a lot of not always cordial agencies. Key man for this will be the Labor Utilization Inspector. WMC now has funds with which to put its own inspectors in the field, on a resident basis in large plants, on a traveling basis for small ones. These inspectors will keep a constant check on the labor practices of the plants they cover, will watch for labor hoarding and pirating, inefficient use of labor, and the like, will call on Selective Service, USES, WPB, or the procurement agencies to clean up bad spots.

• **Friction with WPB**—It will come rather hard to McNutt to lean on the WPB when he is already suspicious of the motives of Vice Chairman Ferdinand Eberstadt in setting up what amounts to a little manpower commission in WPB's Office of Program Development. A couple of months ago, McNutt asked WPB to arrange for giving him lists of war employers in order of importance so that he would know to whom to give preference in assigning labor. In response, Eberstadt set up in OPD a labor requirements branch and a parallel labor requirements committee made up of representatives of all the federal agencies concerned. Both are headed by Carl J. Goff of the Brotherhood of Locomotive Firemen and Enginemen.

As it turns out, the labor requirements setup goes far beyond McNutt's simple specifications. On the one hand, it plans to get right down into detail as to the specific labor needs, in terms of trades and training programs, of individual plants and areas, and is setting up a series of regional editions of itself to do the job. On the other hand, it is assuming the responsibility of deciding

how labor supply affects the feasibility of proposed production programs.

- **No Clear Division**—Actually, so long as an effective manpower authority is lacking, both WPB and Selective Service are forced by the exigencies of their own tasks to encroach on the manpower job. WPB, in the throes of formulating production schedules that won't exceed the available materials, can hardly ignore the danger of exceeding the available supply of labor.

Selective Service, meanwhile, entered the stage of doing a manpower rather than a mere conscription job when it began to draft men with dependents. SSS has never had a very scientific system of occupational deferment. Actually, it couldn't have in the absence of decisions as to the size of the Army or the scale of the production program. If no really disastrous effects resulted, this was because so many men of military age were protected from the draft by dependents. No matter how casual the occupational procedure was, industry could get along on the married men. Now dependency is about to become a secondary factor in determining who fights, and occupation will be the prime consideration.

- **No "Who?" but "When?"**—This does not mean that men in essential jobs can relax. There are some essential activities—mining and farming for instance—in which the work is so tough, the pay so low that it's almost impossible to find replacements for present workers. In such fields deferment will be more or less permanent. But in industry generally, the question is not so much "who" as "when." Employers should expect that nearly all their physically fit men of military age will be called within the next year or so, will have to be replaced with women, children, older men, men in poor physical shape. By present plans, about 10,000,000 men will be in the Army and Navy at the end of 1943, and these must come from something like 13,500,000 men of the right age and health.

However, no one can replace all his employees at once, and occupational deferment thus becomes a matter of figuring out who should and can be replaced first. This is worked out in terms of the essentiality of the particular job, the time it takes to train a replacement, and the worker's dependency status.

- **Deferment Machinery**—Unless and until new legislation wipes out the present local board system, the mechanics of occupational deferment will continue much as at present as regards small local employers. The draft boards will study each man separately as to whether he holds a critical (skilled and scarce) job in an essential industry. Informal arrangements may be worked out to avoid accidentally stripping an employer all at once.

For big employers, however, the pre-



- Today, all the resources of the Allen Wales Adding Machine Corporation are turned to the manufacture of vital war supplies for our country. When Victory comes, we will resume making Allen Wales Adding Machines which our friends tell us are the world's best.

In the meantime, you can best help yourself and us by keeping your Allen Wales Adding Machines in perfect running condition. We suggest that you investigate our Annual Maintenance Service by calling the nearest of our 400 agencies, or write to the Home Office.

# ALLEN WALES

ADDING MACHINE CORPORATION

444 Madison Avenue, New York, N.Y.



**1. Without a single exception,** Packard employees have gone all-out for the "Work to Win" program, have voluntarily pledged 60 full minutes of every working hour to speeding up production, proudly wear "Work to Win" pins, have changed the famous Packard slogan to "Ask The Man Who Wears One."



**2. Teamwork!** Packard president Geo. T. Christopher (center) and union Local president Curt Murdock (left) show army air forces' Commanding General H. H. Arnold and Brig. Gen. B. E. Meyers (right) how Packard management and labor are striving together toward a common objective: Victory!

## The kind of story Hitler hates

{ *What Packard is doing is the sort of thing Hitler thought couldn't happen in a democracy* }

RECENTLY, when Government first recognized the production efforts of U. S. factory workers, nine Packard employees stepped into the limelight to receive awards—the first ones given to workers in the automotive industry.

These awards were given for production shortcuts which were fruit of a continuing plan of management-labor cooperation that recognizes employees on a man-to-man basis of fair treatment.

**Birth of "Work to Win!"** Early in '42, Packard war production reached a new high in output of aircraft and marine engines. But Packard management was convinced it could go still higher . . .

through a plan starting with a voluntary pledge from every worker to improve and increase war production by applying shop initiative and ability.

The idea was discussed with union leaders in Packard Local 190 UAW-CIO—men who shared the opinion that one way to win this war is to increase production.

Together, in a series of meetings, management and labor whipped the original plan into Packard's now-famed "Work to Win" program, a plan to speed up machines, not men.

**Up goes production!** Already, the plan is stepping-up production . . . is

bringing a flood of workers' suggestions (8107 to date) . . . is carrying Packard's long-harmonious management-labor relations to new heights of understanding. Patriotic war-minded workers have already turned in 646 ideas which company engineers have put to use in increasing output . . . and hundreds more are under consideration for early adoption.

Some of the ideas have resulted in new, ingenious, time-saving tools. Others have enabled one machine to do the work which formerly tied up two. Still other suggestions have brought about entirely new methods and procedures, have greatly improved quality, stepped up efficiency.

**Making new records . . . then breaking them.** As one result of the "Work to Win" program, Packard employees are consistently meeting tough WPB quotas on two of the most complicated and precise jobs in the entire U. S. war production effort.

And there is still another result—one which holds a promise for the peacetime era ahead. By helping to develop and perfect the skills and techniques of vast manpower, the "Work to Win" plan is also making a real contribution to the betterment of the industrial future.

But meanwhile, the entire Packard organization—spurred on by cheers from Washington—is out to break still more wartime production records!



**Secret** of the new Curtiss (P-40F) Warhawk's spectacular performance is the terrific power of its Packard-built Rolls-Royce engine. Packard craftsmen tool these brute engines to the hairline accuracy of a fine jeweled watch. Pilots who've flown the P-40F say its power plant helps to make it a honey to fly—and a high-fightin' fool!



**3. Joint Management-Labor Committee** chosen respectively three from company (above left) and three from union (right) steers the program. Separate in function from usual shop committees, this impartial group scans each suggestion, checks it as a workable idea, awards war worker his coveted "Wings" pin.



**4. Citation banners**, merit awards, production scoreboards, plant posters, worker-written shop slogans, all remind the Packard employee that every idea he contributes speeds up the war effort even more. In the "Work to Win!" program he finds an unusual chance for recognition and advancement.



**5. These Packard Work-to-Winners'** production shortcuts won them the first Government awards ever given war workers. Left to right: John Hook, Harry Gielniak, I. A. Clark, Fred Ospedale, Max S. Harris, Peter Cojei, William H. Switzer, George Smolarek, and (absent) David Fabert. **F-L-A-S-H!** Washington just advises 11 more have been similarly honored!



**6. Another honor for Packard Workers.** Stephen Kmiecik, veteran marine-engine builder, accepts Navy "E" button from Lt. Cmdr. A. R. Montgomery of an Atlantic PT-boat squadron, on behalf of his fellow workers. Kmiecik, with 38 years of continuous service, is third generation in his family to work for Packard.

# PACKARD

PRECISION-BUILT POWER

★

**Buy War Bonds and Stamps**

★



OFFICIAL PHOTO—U. S. NAVY

**Every Packard Worker** is proud of the inspiring performance of the Navy's famous PT-boats. Powered by Packard super-marine engines, these swift, hard-hitting boats have seen plenty of action, have written glorious and heroic chapters in the naval history of the Allied Nations . . . from Subic Bay to the English Channel!

## Take a Page from the Aviation Industry's Experience with FIRE PROTECTION



Is fire a greater calamity in a power plant or an airplane factory? The best answer is probably "*Fire damage is the greatest calamity wherever it could have been prevented.*" . . . And fire losses CAN be prevented, today, by Cardox extinguishment.

Aircraft industries, growing by leaps and bounds, have been in an ideal position to make most new Cardox installations. Under the Government's plane building program there was no leeway in time or material for damage in any way preventable. Cardox engineered

applications were proved to offer maximum protection.

Cardox Systems with a full range carbon dioxide capacity—500 lbs. to many tons—plus positive controls, are reducing fire risk to insignificance, in many other industries. Evidence can be presented to manufacturers in many fields that Cardox, when adapted to their individual hazards, is *all-out fire protection.*

*Write for Bulletin 10112.*

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# CARDOX

NON-DAMAGING FIRE EXTINGUISHING SYSTEMS AND TRUCKS

ferred arrangement is coming to be the so-called "manning tables" (page 18) devised to provide a picture of the entire personnel situation of a plant, on the basis of which a schedule of withdrawals of men into the Army can be worked out that will be as fast as possible without crippling the plant.

Big weakness of Selective Service as the prime manpower enforcement agency is that it has no control over the movement of older men and women. If SSS got the job by deliberate intent rather than—as appears likely—by default, the present draft law would have to be amended. But in theory, at least, there are ways in which Selective Service can reach even to those groups. The law puts practically no limits on SSS discretion as to the grounds for deferment. It could take into account, for instance, not only a man's job and his dependents but also the jobs of his dependents—by a sort of point system by which a man gets a point if his wife has a war job. This would be to give concrete effect to General Hershey's recent statement that a wife defers her husband's induction when she takes a job because she releases a single man for the Army.

## Bottoms Up

**Beat-the-tax liquor-buying spree was a grand party while it lasted, but dealers' hangover brings the usual regrets.**

It was like Christmas, New Year's Eve, and the silk stocking buying spree of last fall combined. Liquor dealers said that never in their history had such a horde of purchasers swept shelves bare as last week when beat-the-taxers bought their last full share of prewar, presupertax supplies. Nor did the dealers try to save any inventory, because stocks are subject to a shelf tax. Let 'er go, was their attitude—it'll save money. • **Comes the Hangover**—But now that the party is over, the headaches begin. To start with, OPA has kept a wary eye on the liquor trade and has ruled that the new distillers' tax (about 50¢ per quart of bottled hard goods) must be passed on intact. Dealers who customarily slap a 35% markup on invoices—including whatever taxes are part of such costs—are suddenly finding out that they must separate the tax from true costs. Practically, that has the effect of a lower gross margin.

Nor can the proof of liquor be changed more than three points without an alteration in price. Because the tendency currently is to reduce 90 and 100 proof liquors to 86, the retail price must go down proportionately (BW-Oct. 24, '42, p43). That leaves the re-

## LEBANON OFFERS PIONEERING BACKGROUND TO HELP SPEED

tailers in a sorry position of contemplating (1) lower margins, and (2) somewhat lower prices (excluding, of course, the tax). On top of all of which, the buying spree probably will be followed by doldrums, until Christmas stirs up some tradewinds again.

• **Distillers' Woes**—Meanwhile, the distillers are not excluded from the woes that lie in the future. Since the industry has converted to war, OPA has figured out a ceiling on industrial alcohol which allows about 4¢ profit per wine gallon (a wine gallon equals 1.9 proof gallons) plus 3¢ administrative expenses. Peacetime producers, to whom 3¢ a gallon administrative expense spells red ink, are shaking their heads. They don't see how they can make ends meet. Many of them would gladly shut down for the duration, but know that this would stir up a storm of public indignation. They'll have to stick it out and learn how to operate with their belts pulled in to the last notch.

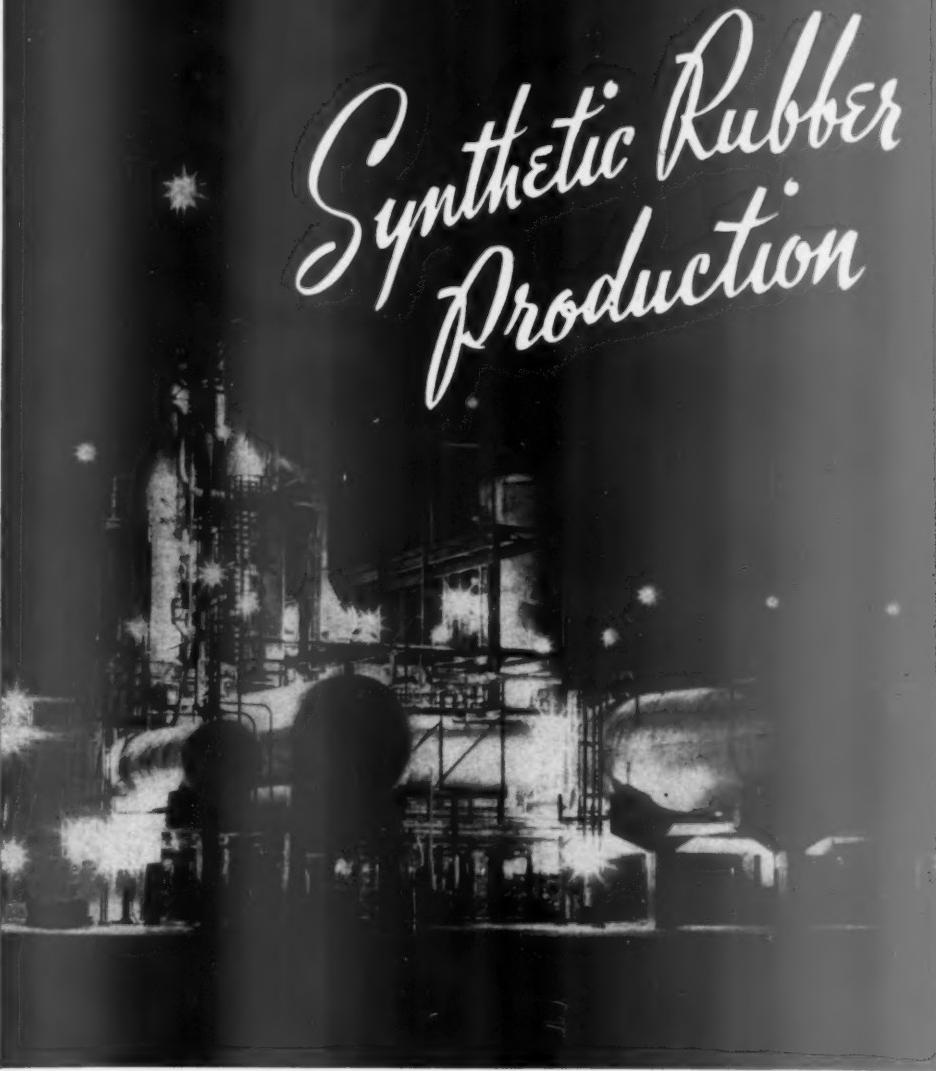
Nor is OPA in any mood to provide relief. The distillers can't graciously ask for a price boost when they're doing war work; OPA thus has them over a barrel. WPB, which conceivably might intercede, has shrugged its shoulders. Apparently WPB isn't interested so long as the war alcohol flow keeps coming.

• **Black Market?**—There are those who say that the present combination of taxes, shorter civilian supplies, and OPA price-ceilings will produce a sinister black market. Their predictions are that syndicates dealing in bootleg liquor, tires, and other scarce goods are just over the horizon. On sober thought, however, the picture isn't quite that ominous. OPA would, in the last analysis, probably rather amend prices than invite the bootlegger to the party.

Among those who will be early petitioners before OPA are the monopoly states (who operate the liquor distribution system under state ownership). Last year these states laid in tremendous supplies of bottled goods, feeling it was the patriotic thing to do since a transportation shortage was in the offing. Big inventories, however, caused these states to have low March ceilings. Currently, when replacements have to be made, the low ceilings squeeze out the profit. An appeal to OPA is certain.

### ARMY CUTS STRAPPING COST

Substitution of round wire for the flat metal strapping used by the Army Quartermaster Corps on nailed wood boxes is expected to save between 45% and 50% of steel and cut the cost by 25% to 30%. All Quartermaster depots now are using round wire strapping of applicable tensile strength, and future specifications will call for it except in those cases where wire proves to be unobtainable.



THE synthetic rubber industry will find the most effective cooperation among supply sources who understand the problems of pioneering. Since the early days of 100 octane aviation gasoline, Lebanon has supplied castings for its production. Lebanon was among the first to use Gamma Ray inspection . . .

which tests the casting soundness produced by proved foundry practice. Circle ① Castings . . . of both standard and special analyses alloys . . . already serve or are about to serve leaders of the synthetic rubber industry in various types of valves, fittings, steam nozzles, diffusers, compressors and other important equipment.

### GENERAL RECOMMENDATIONS

FOR HIGH TEMPERATURES: Circle ① 9; Circle ① 10; Circle ① 30H

FOR SUB-ZERO TEMPERATURES: Circle ① 19; Circle ① 23

FOR NORMAL TEMPERATURES: Circle ① A; Circle ① B

FOR AVOIDANCE OF CORROSION AND CONTAMINATION: Circle ① 22; Circle ① 23

Lebanon metallurgists will gladly make specific recommendations after a study of your problem.

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LEBANON



Stainless and Special Alloy  
STEEL CASTINGS

# THE WAR—AND BUSINESS ABROAD

## Improving the Supply Lines

While the United Nations develop vital routes across Africa to Middle East and through India to China, Alaskan road becomes reality. Push pan-American highway, rail lines.

The dispersal of Japanese naval forces endangering the U. S. land and air bases in the Solomons may provide a long-sought opportunity to reinforce this tenuous foothold and to follow through with enough strength and momentum to carry forward the island-by-island march back up the Pacific battlefield. If the dispersal turns out to be only a regrouping movement, the American position may again be in for a trial by fire such as it withstood only weeks ago.

In Africa, Axis strongpoints appear to be undergoing a softening treatment preliminary to the ultimate British once-and-for-all attempt to sweep across the Mediterranean littoral to Tobruk, Bengazi—and Tripoli.

### Comeback in India

The stage is being set for a United Nations comeback in India. If supplies to China are to continue and increase in volume, the constant pressure from Burma-based Japanese bombers must be removed. Developments indicate an early allied offensive to test the toughness of the problem and at the same time to divert air attacks from the vital transport line between Assam (in northeast India) and China.

Smoothing out of supply difficulties, right from the several battlefronts all the way back to the source of production, is being tackled by experts with renewed vigor. Quiet development of the shortcut across Africa's midriff—accompanied by intensive improvements of ports, roads, and airfields—is typical of similar work in progress in China, Australia, Iran, and Alaska.

### Alcan Highway in Use

Opening of the Alaska-Canada highway last week, a month ahead of schedule, served to remind Americans of the importance to our own defense of such towns as Fairbanks and Whitehorse (see map). Dedication of the highway may have been set for Nov. 15, but this week the first caravan of trucks, carrying men and munitions for the defense of our northernmost territory, was already rolling over the road.

The Alcan road—rushed to completion while the Japanese threat to the Aleutians was at its height—is of immediate usefulness as a war highway. With innumerable airports and landing fields

flanking its course, the road is farther inland than originally planned, out of reach of ship-based enemy planes in the Pacific. Feeder roads from Prince Rupert (Canadian National railhead on the Pacific near Alaska's southern tip) and from Vancouver are under construction and will increase the utility of the road.

### On Down to Rio and B. A.

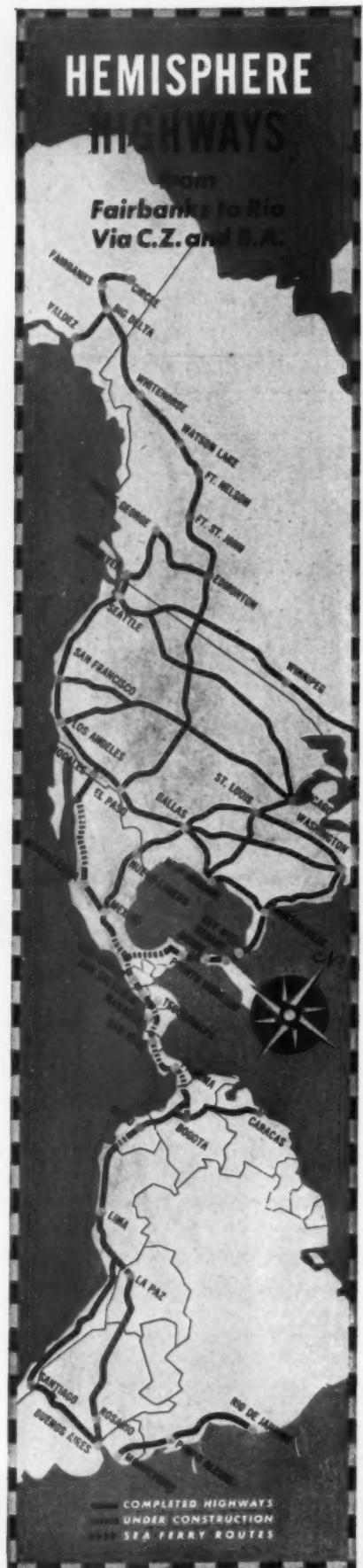
Important as the northern link may be to the Army, progress on other segments of the pan-American system are more closely watched by producers of war equipment who are reliant upon supplies from south of the border.

All incomplete sections of the road are under construction after years of argument and delay, but final completion date of the 15,000-mile road is still a question mark. Connecting roads now permit uninterrupted travel from Fairbanks to a point near the Mexico-Guatemala border, but there are a half-dozen breaks on the way through the Canal Zone to Peru. From the Peru-Colombia border the road is complete through Lima, Santiago, Buenos Aires, and north to Rio de Janeiro. The optional route from Lima through La Paz, Bolivia, and on to Buenos Aires is the latest answer to the Andes winter which closes the Santiago-B. A. road for several months each year.

### Railroad Improvements

To supplement the growing network of highways, the railroads of Latin America are undergoing wartime renovations and extensions. The last rivet in the bridge over the Suchiate river on the Mexico-Guatemala border was pounded home this week, while locomotives were already chuffing overhead. The bridge links the Mexican railroads with those of Guatemala and El Salvador, bringing vital products of these countries within four days travel time of the United States. A transfer of cargo from one train to another is still necessary just within the Guatemalan frontier, but special loading platforms between the tracks have been built for this purpose. Previous to completion of the bridge, shipments were poled across the river on tiny rafts.

Similar critical links are being hurriedly thrown together under the stress





## U.S. TRAVEL 1942 STYLE

**I**N the months since Pearl Harbor the railroads of the United States have carried three times as many soldiers as in the same months of the last war.

Of the 6,800 Pullman sleeping cars and 17,500 passenger coaches on the railroads today, a great part are assigned to military movements—and the armed forces have first call on all the rest.

Besides troop movements, there are those who must travel on essential war busi-

ness. There are service men on furlough. There is the shortage of tires and the rationing of gasoline—all adding to the demand for space on the trains.

That demand must be met with the cars we have—other war needs make it impossible to get any more.

So please help the other fellow who *must* travel—and help yourself—and help us to get the best use out of what we have.

**DON'T WASTE TRANSPORTATION.** *Plan early*—Make reservations and buy tickets as far in advance as possible. *Avoid week ends*—Do your traveling in the middle of the week whenever possible. *Travel light*—Limit your hand baggage to actual requirements. Other baggage can be checked. *Plans changed?*—Cancel your reservation promptly if your trip is deferred or called off. It will help the other fellow.

★ ★ ★ ★ ★ ★ ★ ★

ASSOCIATION OF

**AMERICAN**



**RAILROADS**

WASHINGTON, D.C.

of the war's demand for land routes to supplement U-boat infested sea lanes. While many of the projects being hastened to completion may require replacement after the war, the bonds of trade which are being developed today will guarantee their permanence as integral parts of the hemisphere's transportation system.

## AIDING TURKEY

Despite continuing doubt about the status of Turkey, there has been no lack of effort to keep her on the side of the United Nations. Since July, 1940, British engineers have rebuilt the ports of Alexandretta and Mersin, and supplies valued at more than \$40,000,000 have been sent to that country in the form of railway locomotives, structural steel, mining machinery, cotton and woolens, oil, rubber, and foods. Aid of this sort, alleviating the pressure of war on Turkey's economy, has been supplemented by limited amounts of military equipment.

## VITAL INDIAN LINK

A recent survey of the Eastern Indian Railway System—servicing the provinces of Bengal, Eastern Bengal, Assam, and Bihar—discloses that even under bombardment from Japanese bombers in Burma, it is operating efficiently, helping to move lend-lease goods toward China

and supply industries in the Calcutta area. Recent strikes inspired by the Congress Party did not extend to workers on these railroads, and distribution of coal reserves—always a preliminary to extensive shipments of more essential materials—is progressing without hitches.

## BRITISH LABOR ALL OUT

British unemployment hit a new low in September when 98,662 were idle, compared with 107,534 in August and 162,655 in September, 1941. The Labor Ministry at the same time noted that roughly 22,000,000 of Britain's working population of 33,000,000 are mobilized either in the armed forces or in war industries.

## BITS AND PIECES

A complete American tire factory—reputed to be one of the most modern in the industry—is being supplied by the Ford Motor Co. for shipment to the Soviet Union. The annual capacity of the plant is estimated at 1,000,000 tires. A new twist in cargo-space utilization has been introduced with shipments of canned milk in empty cartridge cases. Two cans fit snugly in each case . . . . Venezuela has come forward through a commercial representative to offer the U. S. 1,000,000 pounds of silk cocoons. Silk of this sort—unfit for stockings—will fill a vital need in war production.

## **How can you be sure of CHOOSING THE BEST WORKER for the job?**

Increased demands for speed and quantity of production—scarcity and inexperience of labor—and other conditions complicate the job of hiring and placing people today. But Charles Drake has discovered, developed, and here presents a new approach to aptitude testing to help you meet these problems. No highly specialized knowledge required; utilizing data available in your plant, you can design tests of unusual simplicity and directness, that will pay big dividends in disclosing the most capable and trainable applicants and employees.

### Learn how from this concise, readable book

Here is a new, realistic, and practical technique for the selection of industrial personnel. The methods consist primarily of designing special performance tests embodying the essential elements of dexterity and perception discovered by analyzing an industrial job or group of similar jobs. The treatment is concise and clear, and many illustrations of actual tests provide a usable guide for industrial engineers, personnel workers, and others in employing this technique.

### SHOWS YOU:

- how to design simple tests based on the actual manual abilities and perceptions required in a job or group of jobs
- the basis of the method and how it compares with other types of testing
- principles, methods, and examples of test design and operation
- methods of scoring and interpreting results



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By CHARLES A. DRAKE

Head, Methods Department, United Merchants and Manufacturers Management Corporation. 140 pages, 6 x 9, illustrated. \$2.00.

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Send me Drake's Personnel Selection by Standard Job Tests for 10 days' examination on approval. In 10 days I will send \$2.00, plus few cents postage, or return book postpaid. (Postage paid on cash orders.)

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## CANADA

## 2,000 Into 9?

That's the concentration ideal of Ottawa as it surveys wholesale grocers—but nothing so severe will be tried.

OTTAWA—Can the business of 2,000 wholesale grocery firms in Canada, serving a retail trade supplying 12,000,000 consumers, be concentrated in the hands of nine firms—one for each of the Canadian provinces?

• **Trade Confers on Plan**—This question is a typical reason for the uneasiness of Canadian business in the final quarter of 1942. It is representative of Ottawa's efforts to measure the ultimate possibilities of nonwar business concentration to release manpower for the fighting services and war plants. It was submitted to representatives of the Canadian wholesale grocery trade at a conference with curtailment planners in Toronto last month.

Ottawa has no immediate intention of contracting the wholesale grocery trade to the extent indicated or any other divisions of business to a corresponding degree. Manpower requirements do not demand it.

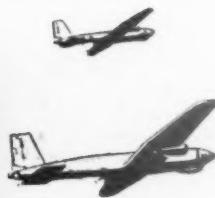
• **Exploring the Possibilities**—Because officials don't know what the war will demand by this time next year, they are trying to find out how far it is possible to go in squeezing nonwar business. Failure of officials to make this clear to business men is causing alarm.

In preparation for actual concentration, the Wartime Prices and Trade Board (the curtailment administration) issued orders this week designed to freeze Canadian business in its present lines of activity. Existing manufacturing and trade divisions of business are closed to newcomers, and firms or individuals engaged in them are barred from branching out into other lines. A perfume manufacturer cannot begin production of cosmetics as a sideline. A grocer will not be permitted to install a meat counter to make up for loss of business in grocery lines, which are in short supply. Gasoline outlet operators can't start selling electric toasters.

Included in the freeze order are establishments engaged in warehousing, undertaking, laundering and cleaning, beauty treatments, plumbing and heating, painting and decorating, supplying meals, refreshments, and beverages, showing motion pictures, slaughtering, and manufacturing on a custom or commission basis.

• **Christmas Tree Shortage**—Before the war, nearly every Canadian home had a

# "Look at our pretty planes"



## ... They COULD be enemy bombers!

Little do *they* realize the awful possibilities of planes flying overhead. May they never have to! But this is War, and *you* don't overlook the fact that it *could* happen here ... that the very real risks of trial blackouts may one day be the grim hazards of a bombing raid, sabotage or invasion. Your time and life are just as precious to you and to your dependents, whether endangered by that elusive piece of soap in your bathtub or by a Nazi bomb. In liberal contrast with most others, the Commercial Travelers' policy covers these *extra* risks of War.

### Civilians' War Risk Covered at No Extra Cost!

Mishaps resulting from ANY ACT OF WAR are covered the same as "everyday" accidents ... for loss of life, time, sight or limb ... AT COST for 220,000 members who deal *direct* with this strong old company.

You do not have to be a commercial traveler to join. All preferred male risks are covered, and medical examination is not required. Age for joining: 18 to 55 years.

BROAD COVERAGE protects you night and day, at home or on trips, at work or at play. You do not have to be gored by a bull or fall down an elevator shaft to collect.

**\$5,000 or \$10,000    \$25.00 or \$50.00**  
Loss of Life, Sight, Limbs    Weekly while Disabled

**Only \$2 to Join**

This small initial fee is the only investment to make until late next March, 1943 ... if your application is accepted now for the \$5,000 policy. Other plans may include double amount of accident protection; health insurance and hospitalization insurance at modest additional cost.

## The Commercial Travelers MUTUAL ACCIDENT ASSOCIATION of AMERICA

H. E. TREVETT, Secretary

FOUNDED 1883

UTICA, NEW YORK



**Covers ANY ACT of WAR—Blackouts,  
Sabotage, Bombings, Invasion**

Air raid wardens . . . volunteer police . . . auxiliary firemen . . . or members otherwise engaged in volunteer civilian defense work protected for war accidents the same as for "everyday" mishaps. Members in the armed services are protected within our continental limits so long as no actual warfare occurs therein.

TEAR OUT AND MAIL THIS COUPON TODAY

H. E. TREVETT, Secretary—The Commercial Travelers, Utica, New York  
Send me without obligation your free booklet FACTS ABOUT ACCIDENT, HEALTH AND HOSPITALIZATION INSURANCE with full information about civilians' war coverage included at no extra cost.

My name is Mr. ....

Address .....

Age .....

Occupation .....

NO AGENT WILL CALL

# READY!



## RARE GIFT PEARS

NOW READY for shipment... rare Franciscan Pears... hand-picked and hand-packed especially for Christmas giving. The most beautiful gift pack in America! Send them to your friends and customers. Great big luscious pears that are a treat to the eye as well as the palate. Sent prepaid on receipt of \$2.55 (15 to 22 pears, according to size). This year gift shipments should be made early. Order now for your own table & for giving.

### SWEET BRIER ORCHARDS

1621 University Drive • San Jose, California  
"IN THE VALLEY OF HEART'S DELIGHT"

**Need A SEASONED STAR?**

We have experienced reserves to help you beat production quotas

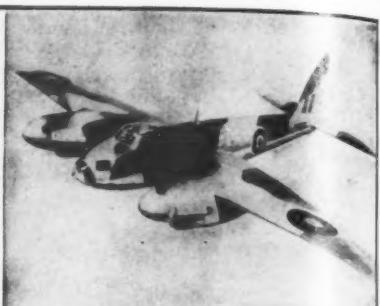
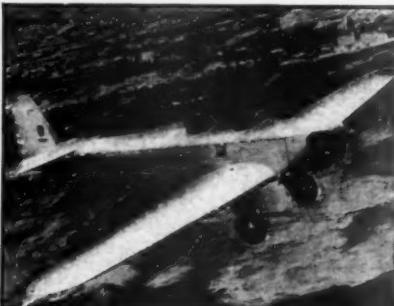
*Call on Craft*

FULLY EQUIPPED METAL FABRICATION PLANT offers you its facilities if your war production includes

- \* STAMPING
- \* SPINNING
- \* DEEP DRAWING
- \* WELDING
- \* POLISHING
- \* SHEET METAL WORK

**WRITE OR WIRE** for complete information about our large, modern plant and experienced engineering staff geared to give you immediate action on your Sub-Contract work. Estimates promptly furnished... Send us your drawings

**Craft MANUFACTURING CO.**  
Stainless Steel Specialists  
1512 No. Fremont St., Chicago, Illinois



## PLYWOOD FOR ALLIES

Plywood planes fill a strategic-metals gap for two United Nations. The light Mexican Teziutlan trainer (left) is in mass production in the government's Mexico City factory. Powered by a Lycoming 125-hp. aircooled en-

gine, it takes off fully loaded with a 160-foot run and has a 7-hour flying range. The war-painted British De Havilland "mosquito" bomber, packing four 20-mm. cannon and four .303 machine guns, has already proved its mettle in combat. It is powered by two Rolls Royce engines.

Christmas tree, and hundreds of carloads were shipped during November and December every year to New York, Chicago, Philadelphia, and other U. S. cities. The labor shortage, especially acute in the timber trade, is compelling suspension of the Yule tree trade this year. A control order bars delivery of Christmas trees after Nov. 15 and cutting was banned from Oct. 31.

Greater emphasis on management-worker relations in Canadian industry is an outgrowth of the manpower shortage. Since his appointment as director of National Selective Service six months ago, Elliot Little, former manager of Anglo-Canadian Paper Co., has been campaigning for creation of management-worker committees in war plants. He has insisted that labor have a say in plans for contracting civilian industry.

• **Working on the Foremen**—Latest move is toward inauguration of a job-relations training program for essential industry. Immediate objective is the instruction of plant foremen and supervisors in the handling of workers with a view to avoiding grievances and discontent. The Labor Department of the federal government will conduct an instruction course for foremen and other plant bosses.

Canada's oldest business, the fur trade—started in a big way in the 17th century when Charles II of England chartered the Company of Gentlemen Adventurers Trading into Hudson's Bay—will be one of the first to be contracted in the nonessential industry curtailment program. Donald Gordon, czar of the program, doesn't agree with the view shared by cabinet ministers' wives and sales ladies alike that fur coats are essential for wartime warmth. The fur business is to be squeezed for the manpower it can spare.

• **Rabbit Isn't Tiger**—As a preliminary, however, the business is being rational-

ized and deglamorized. The Wartime Prices and Trade Board has ordered elimination of exotic names concealing the identities of furs sold in Canada. In addition to familiar but inaccurate sales names, all furs must now bear the names of the animals from which the skins are taken.

Hardest hit of the furriers' friends is the rabbit whose pelt has been sold after treatment under no fewer than 37 names:

Arctic Seal	Bay Seal
Australian Seal	Beaverette
Super Seal	Belgium Beaver
Glo Seal	Belgium Lynx
Electric Seal	Chinese Lynx
Baltic Seal	Electric Beaver
Russian Seal	Erminette
Siberian Seal	French Beaver
French Seal	French Chinchilla
Baffin Seal	French Leopard
Northern Seal	French Sable
Near Seal	Lapin
Nordic Seal	Mendoza Beaver
Nubian Seal	Moline
Sealine Seal	Russian Leopard
Baby Beaver	Squirrellette
Baltic Fox	Squirloline
Baltic Leopard	Twin Beaver
Baltic Tiger	

## LESS GAS FOR CANADIANS

A direct result of extension of gasoline rationing in the United States is the further cut this week in the gasoline allowance for Canadians. Coupons good for 5 gal. when issued in April, cut to a 4-gal. value two months ago in central provinces, now drop to a 3-gal. value across the country. The Maritime Provinces have been under the 3-gal. limit for some time, but the prairie provinces have been allowed 5 gal. Recently private car owners not using their cars for business were cut to an allowance of 16 coupons for the October-April period.

Proposals to ration rail travel have also found their way across the border.

# Have you heard about the Silver Bombers?

The story of 2410 men who are pledged to step up production in thousands of war plants.

It all began with the idea of one man. He was a lighting man devoting his time to helping war factories increase production through the use of better lighting.

He was getting results. Over and over again he had seen production of essential war materials stepped up three per cent, ten per cent, even as much as twenty-five per cent after lighting faults were corrected. Accidents decreased. Spoilage went down.

One day he said to himself, "Since it takes 100,000 man-hours to build a four-motor bomber, every time I can add 100,000 man-hours by speeding production it's the equivalent of building a bomber myself!"

## More than 500 bombers

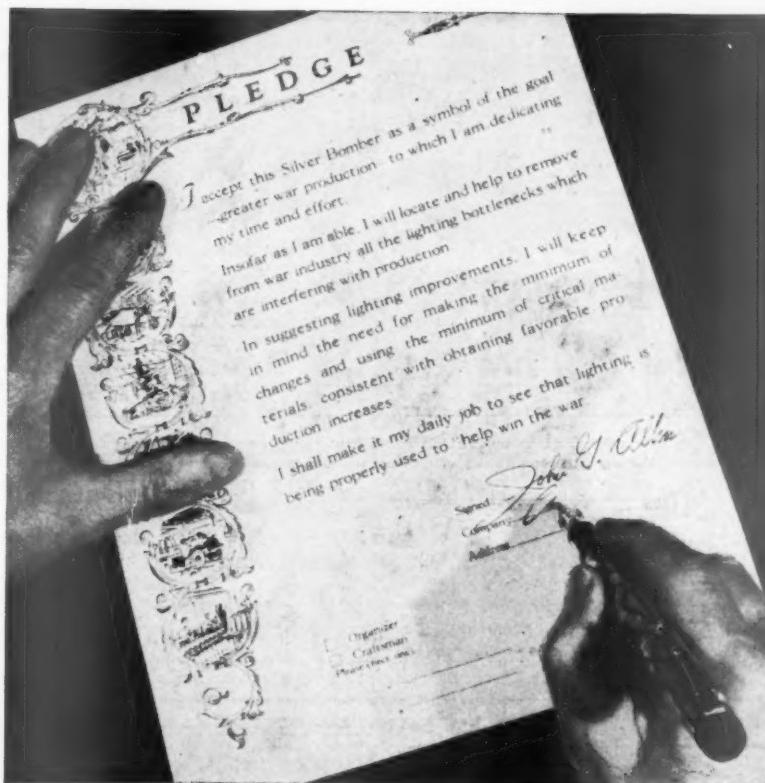
That idea has grown until, today, 2410 lighting men are enlisted in this symbolic "Bomber Building" army. Each has signed the pledge (Shown at right). And each is proud to wear the Silver Bomber button. Already, by the most conservative estimates these 2410 men are adding the equivalent of 51,000,000 man-hours a year to our war production. Enough man-hours to build more than 500 bombers!

These "Bomber Builders" know how to break lighting bottlenecks caused by glare, or shadows or gloom. And they are seeing tangible results in faster production, fewer accidents, less spoilage.

They are working with plants employing thousands of workers, and with shops employing as little as two. They will go anywhere, any time to help with a production problem. They are building "bombers" for victory.

\* \* \*

General Electric is glad to publish this tribute to these Wartime Lighting Counselors who are doing so much to speed war production. They include lighting men from Electric Service Companies, Electrical Jobbers, Contractors and Manufacturers as well as General Electric's own lighting staff.



THIS IS THE PLEDGE that 2410 lighting men have signed (as of October 26) indicating their determination to help war plants speed production with better lighting.



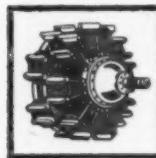
THE MAN WHO WEARS a Silver Bomber is a good man to know. Welcome him when he comes to your office and let him show you how simple changes in lighting can help break production bottlenecks.

**GENERAL ELECTRIC**  
LAMP DEPARTMENT, NELA PARK, CLEVELAND, OHIO



## In Action with the American Bombers

Bomber pilots will tell you that successful raiding calls for three things—pendable engines, long-range planes, and the right explosives.



Frick Refrigeration is used in making superior engines for our fighting planes.

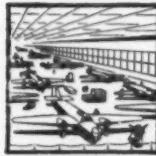
What part does refrigeration play in supplying these?

Aircraft engines, superchargers and instruments are made and tested with the help of mechanical "cold". Temperatures down to 70 deg. below zero F. are employed for this work.

Drafting rooms, offices, research laboratories, first aid rooms, cafeterias and assembly lines in airplane plants find air conditioning and refrigeration vital aids.

Plants making TNT, dynamite, and other explosives require refrigeration in large amounts for control of temperatures and reactions.

And when we say refrigeration, we mean



One big bomber plant uses 36 Frick machines for air conditioning, food service, etc.



Plants making explosives have for many years utilized Frick Refrigeration.



## Refrigeration

It's in action with the American Bombers



# MARKETING

## Inventory Order

WPB less concerned about little man than about keeping all corners of nation stocked. What's coming, who's exempt.

Now that the War Production Board has decided to limit the inventories of the bigger merchants and manufacturers (BW—Oct. 24 '42, p8), the smaller elements are still far from satisfied. WPB's action, say they, is plainly a case of locking the barn after the horse was stolen.

Specifically, these squawks hinge on two arguments. The first is that WPB's forthcoming order won't confiscate any existing accumulations, which means that if a big fellow's warehouse is bulging with nylon stockings, for instance, there's no way the little fellows can get their share at this late date. The second argument is that, unless inventories are geared to production, the big fellow can still outbuy his smaller competitor in lines where shortages impend.

- Wiping Its Hands—WPB, on the other hand, gives every indication of being finished with a distasteful business. Last week it issued what amounts to a White Paper explaining its ac-

tions. Written by Dr. Ralph S. Alexander and Dr. Harry D. Wolfe of the Wholesale and Retail Inventory Policy Committee's technical staff, the bulky document holds no brief for the small business man just because he's small. Pointedly the authors remark that "it is doubtful if the best interests of the country would be served if inventory control were applied merely in the interest of fairness to preserve the small retailers who would probably be more valuable to our defense economy if... employed in the war industries."

What primarily caused WPB to step into the picture at all, says the paper, is the fact that department stores and big independents gobbled up so many stocks that the little stores in little towns, as well as merchants in defense areas, are running into supply difficulties. The effects of this distorted distribution would be bad on the morale of the population, might lead to black markets and profiteers' prices. Furthermore, says the report, if there is to be any widespread rationing, retailers must have some stocks on hand to give the rationing system a start. Finally, WPB believes that buying beyond actual needs germinates a "large-stock psychology" which will tend to perpetuate inflationary tendencies into the postwar era.

- Problem of Distribution—In short, the

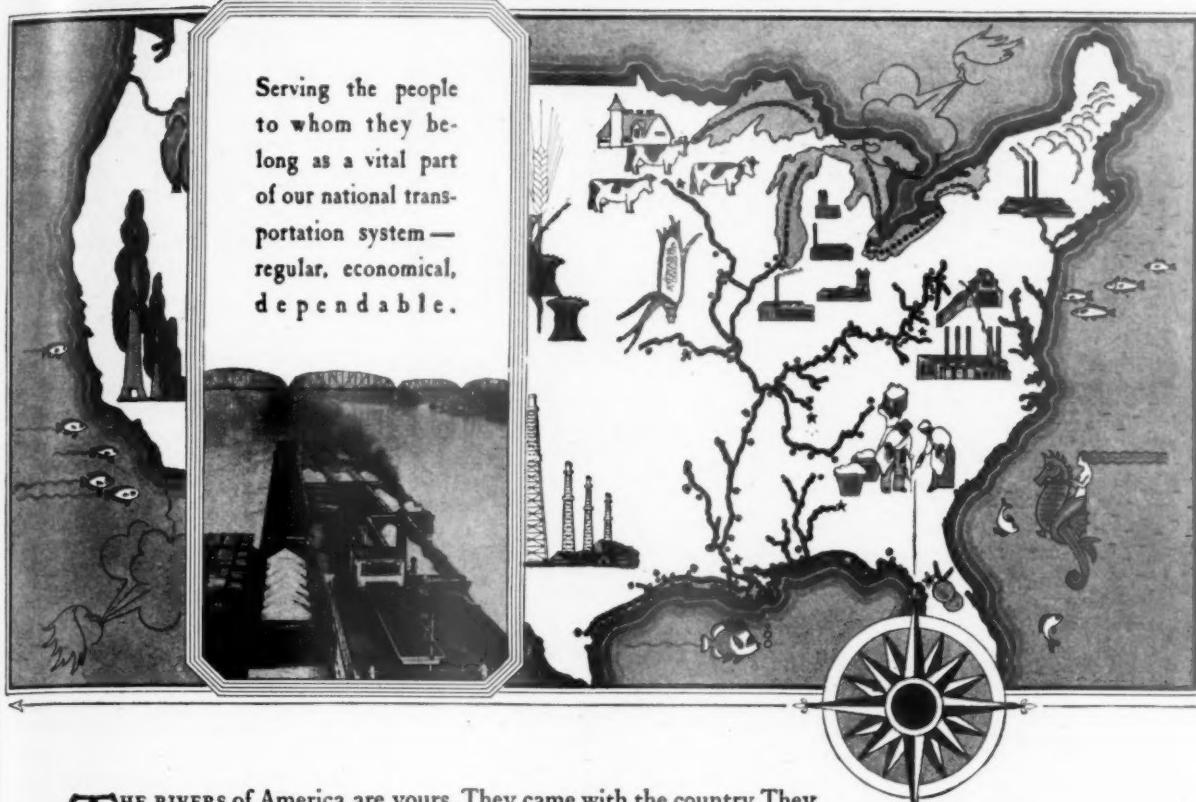


## THANKSGIVING DAY FLAVOR

Farmers in the Pacific Northwest who took heed of the impending shortage of sage—formerly imported from southern Europe (BW—Apr. 19 '41, p29)—are now in a position to cash in

providing, of course, they can find harvest labor. This week's \$64.00 question is: When the sage from the 15-acre field planted by E. C. Price near Yakima, Wash. goes into dressing, how many Thanksgiving Day turkeys will be required to envelop it?

# Your RIVERS



Serving the people  
to whom they be-  
long as a vital part  
of our national trans-  
portation system—  
regular, economical,  
dependable.

**T**HE RIVERS of America are yours. They came with the country. They were highways of transportation before the Constitution—before the Declaration of Independence.

The government of the United States since its earliest days has recognized the value of transportation as a national asset. It granted great tracts of land to the railroads to help them get started. It teamed up with the states in the building of roads and it set its engineers, more than a century ago, to the task of transforming the rivers into great thoroughfares of fast, economical and efficient transportation.

With the development of the rivers themselves has come a proportional expansion of transportation facilities. Locks and dams built by the government have been paralleled by tow-boats, barges and terminals built by the Barge Line Companies.

Today your rivers are busy. Today approximately 100,000,000 tons of freight per year moves up and down the Mississippi River System on fast, regular and dependable schedules. Your rivers are contributing handsomely to the all-out American industrial effort which the war has brought about. When the war has been won and the ways of peace are resumed they will continue to provide American shippers with the ways and means of modern transportation, regular, economical, dependable.

---

AMERICAN BARGE LINE CO., PITTSBURGH, PA.

---

CAMPBELL TRANSPORTATION CO., PITTSBURGH, PA.

---

UNION BARGE LINE CORPORATION, PITTSBURGH, PA.

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# IMPORTANT TO WAR PRODUCTION PLANTS

**This New, Informative, 28-Page Book**

Efficient dust recovery is important to every branch of war production...aviation, chemicals, dehydrated foods, machining, metal working, processing, rock products, and many others. All these can use Buell Dust Recovery Systems to save material, increase production, and insure quality.

The wide use of Buell Dust Recovery Systems by so many of America's great industrial concerns is their best advertisement. A representative list of Buell users shows more than half with two or more installations!

The new book shown above explains Buell's seven *plus* advantages, of particular interest to war plants. Send for your copy today. Ask for Bulletin B-11.

**BUELL ENGINEERING COMPANY, Inc.**

60 Wall Tower, New York

Sales Representatives in Principal Cities

**CONSULT BUELL First IN DUST RECOVERY**  
for Chemical • Rock Product • Metallic • Food • Fibre or any other dust



board implies that it isn't too perturbed about the little fellow failure to imitate the big store, but is concerned over keeping all corners of the nation supplied with necessary items.

The position of the large department stores (sales over \$500,000) on inventories is evident from the following picture:

	1939	June 30,
	Average	1942
	Supply	Supply
	(Months)	(Months)
Women's-Children's Hosiery	2.0	4.37
Furs	3.2	33.21
Men's Clothing	4.8	5.98
Furniture	4.1	6.22
Major Household Appliances	2.8	7.31
Domestics, Blankets, Linens	3.5	7.62
Basement Store	2.3	3.41
Main Store	3.2	4.82

Data: War Production Board; adapted from National Retail Dry Goods Assn. and Federal Reserve Board statistics.

• **Big Boys' Advantage**—Similarly, when the independent retailers of all types are considered as a group, the big fellows uniformly have the edge on inventories over the little fellows, as shown by these comparisons:

	DEC. 31, 1941 VS. DEC. 31, 1940	Percent Gain in Inventories	Sales
\$100,000 and over	26	18	
\$50,000 to \$99,999	17	14	
\$30,000 to \$49,999	14	13	
\$20,000 to \$29,999	11	12	
\$10,000 to \$19,999	8	10	
Under \$10,000	7	6	

Data: War Production Board and Bureau of the Census.

The chains, says the WPB report, have been only spotty offenders. Men's wear stores lead the parade, with the variety chains tagging on behind. The other major classes of chains are declared innocent. The figures:

	STOCK-SALES RATIOS
(Expressed in Number of Days' Sales)	
1939 "Normal"	June 30, 1942
Men's Wear Stores	90
Shoe Stores	92
Drug Stores	55
Variety Stores*	59
Grocery Stores	24

\* Includes 5% independent stores.  
Data: Bureau of Foreign and Domestic Commerce.

• **Control All Along Line**—Inventories of wholesalers and manufacturers do not appear to be excessive. In January, 1940, manufacturers had a 2.2 months' supply; in June, 1942, the figure had sloped off to 1.8. Limited-function wholesalers in 1939 maintained a 46 days' supply; on June 30, 1942, the supply would cover only 44 days. Furthermore, small wholesalers seem to have increased inventories in relation to sales in greater proportion than big wholesalers.

Nonetheless, WPB thinks that wholesalers and manufacturers must be subject to control to prevent retailers from using them as storehouses—and thus avoid the effects of regulation.

Currently WPB is writing an order

that will cover the whole inventory situation. According to advance information, the policy will be to make it simple, in accordance with usual accounting procedure and business methods, inexpensive to administer, flexible.

• What's Required—To this end, WPB will order merchants and manufacturers to determine their stock-sales ratios (by quarters) for the base years 1939, 1940, and 1941 and to keep current inventories geared to that base. This applies only to finished civilian goods, and only on an over-all, total company basis. In determining allowable inventory for a forthcoming quarter, the merchant or manufacturer would be granted a 5% leeway before penalties would be applied.

WPB has not indicated what such penalties will be, or what will happen to a retailer who already has a tremendous inventory. But confiscation hasn't even been mentioned in even the wildest guesses, so that particular chastisement will presumably not be used.

• Who's Exempt—Exempt from the order will be: any merchant or manufacturer whose sales in the year ending Sept. 30, 1942, were less than \$100,000 or whose inventory was below \$25,000 at cost value. Regardless of size, the following are also exempt: merchants engaged in the food business, eating and drinking places, second-hand stores, florist shops, antique stores, service establishments, steel or other raw material warehouses, dealers in motor vehicles or motor replacement parts, hay-grain-feed stores, farm implement dealers, merchants handling fuel, and importers; also manufacturers supplying these merchants.

Incidentally, the WPB report contains the first down-to-earth estimate of



### RUSHING THE CAN

To test consumer reaction to a metal-saving scheme, the Glidden Co. is currently offering, in a few of its stores, a proposition whereby the customer saves 25¢ on every gallon of certain lines of paint purchased providing he brings his own container.

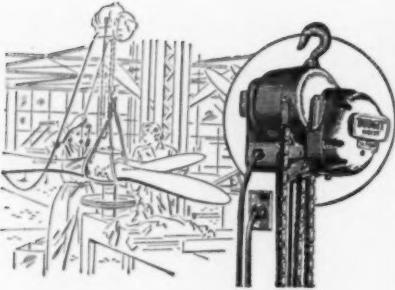
**Skip Hoists KEEP THE WHEELS TURNING for Victory...**

● Introduced by Bartlett-Snow engineers who installed the first fully automatic unit in 1907, and have pioneered in its development ever since, the skip hoist is preferred when the lift is high and the material abrasive.

Today these dependable systems find ready use elevating coal to overhead bunkers in power plants providing the steam and electricity that keep armament production rolling.

Bartlett-Snow's long experience in building power plant coal handling systems include large and small installations,—employing skip hoists, bucket elevators, or belt conveyors, depending upon the need. Recently conducted standardization work has minimized the cost of new engineering and expedited manufacturing and installation. The C. O. Bartlett & Snow Co., 6000 Harvard Avenue, Cleveland, Ohio.

**BARTLETT-SNOW**  
ELEVATING, CONVEYING AND PROCESSING EQUIPMENT  
ESTABLISHED 1885



## The girl's place...

**H**ER brother has gone to war. She has donned working overalls and taken his place in the army of producers. With her own feminine muscles she could not have lifted the heavy parts. So the tireless 'Budgit' Hoist was drafted to lift for her. She keeps up with the best of the men and never becomes fatigued.

'Budgit' Hoists are portable, electric hoists with lifting capacities of 250, 500, 1000 and 2000 lbs. They are priced from \$119 up. Hang up, plug in, and use. For complete information, write for Bulletin 348.



## 'BUDGIT' Hoists

MANNING, MAXWELL & MOORE, INC.  
MUSKEGON, MICHIGAN

Buidlers of 'Shaw-Box' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties. Makers of Ashcroft Gauges, Hancock Valves, Consolidated Safety and Relief Valves and 'American' Industrial Instruments.



## Uncle Sam's War Chest

calls for a BILLION DOLLARS  
A MONTH in War Bond sales.  
Do your part by buying the  
limit . . . and by encouraging  
your employees to set aside at  
least 10% of the gross payroll  
in War Bonds, through the  
Payroll Savings Plan!

the civilian supply situation thus far given out by the government. In units, new supplies for the last half of 1942 will be 6% lower than in the first half of the year. And unit supplies of new civilian goods in the first half of 1943 will be down 17% from the same period of 1942. Sources of this data, says WPB, are confidential.

## A. & P. on the Spot

That's the position food trade sees nation's No. 1 chain in as Dallas grand jury hears Arnold's antitrust charges.

With grand jury hearings in Dallas approaching the end of their first month, the food trade was waiting this week for the other shoe to be dropped in Thurman Arnold's investigation of chain stores.

The first shoe fell well over a year and a half ago, when investigators of the Antitrust Division first called on the big chains, their customers, competitors, and suppliers, and began asking very pointed questions. That shoe-dropping didn't create much of a stir outside of industry circles, but the trade is expecting the second one to hit the headlines with a bang, for according to present calculations the big noise, which will blast the sepulchral silence that surrounds all grand jury proceedings, will be nothing less than an indictment of the world's biggest chain store system—the Great Atlantic & Pacific Tea Co.

Other chains figure that for the present the heat is off them, because Arnold's investigators, now virtually all concentrated in Dallas, stopped asking embarrassing questions some time ago, and that's why the finger points squarely at A.&P. as the target of the grand jury proceedings. Of course, if Arnold could make his charges stick against the nation's No. 1 chain in the long court fight that would follow after an indictment was returned, the other chains know that there might be some tough repercussions. But that's a long way off, and so for the present they aren't worrying too much.

In tackling A.&P.—the single biggest factor in the single biggest business in the world, that of feeding America—Arnold would have the toughest fight of his tough, trust-busting career. For the chain, which accounts for more than 10% of the nation's retail food business, can count on a lot of popular support for its defense, and it's an accepted part of American folklore that the courts do read the newspapers.

Then too, the big chain can count on some support in high circles in Washington. The Office of Price Administration, for example, has leaned pretty



## FREE DEAL IN BONDS

When Steve Vasilakos, White House peanut man, opened his free-peanuts-with-every-bond deal with a sale to Speaker Rayburn, little did he realize that his cherished title of "D. C.'s most popular little business man" was likely to be supplanted by the commonplace "Big Bond dealer."

heavily on A.&P. in making its price controls work at the retail counter. If the big chain had kicked over the traces, OPA would have found it pretty tough to keep thousands of other retailers in line. And A.&P. has been extremely cooperative with OPA.

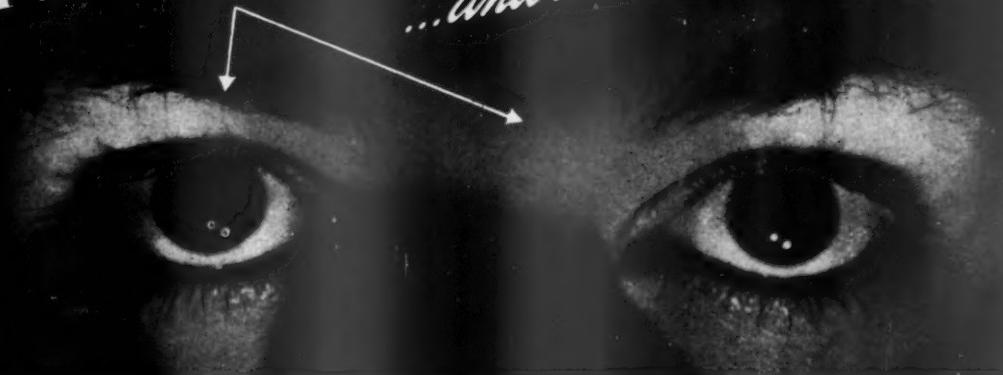
In fact, other chains have been heard to complain that A.&P. has been "too damned cooperative." For example, they say that when they take to Washington a case for a boost in the ceiling on some particular line of goods, they too often have to go without A.&P. That's natural enough, for the No. 1 chain has always played a lone hand and had little if anything to do with the cooperative enterprises of other chains. But when they pled their case before OPA only to be told that A.&P. was able to get along with the ceiling as it was, and why couldn't they?—well, that didn't seem so natural, but they found it explicable in view of the Dallas difficulties confronting A.&P.

If in the end, Arnold is forced to soft-pedal his case against A.&P., it won't be the first time that his antitrust campaigns have had to bow before the exigencies of the war emergency, but this one would break his heart after the expenditure of hundreds of thousands of dollars in the preparation of the case.

Not until the Dallas hearing is concluded can anyone know the nature of any charges against A.&P., but because housewives across the country are willing to swear by the savings they make at the familiar red front stores, and because popular opinion inevitably enters into the judicial equation—a circumstance which Arnold himself fully appreciates—he can be expected to make

# TWO CRITICAL WAR MATERIALS

*...and how to conserve them*



• The two eyes of each of the *thirty-seven million* American workers are an irreplaceable war resource—one that must not be wasted or abused.

For modern war production, with its accent on close tolerances, demands faultless, unflagging vision.

And now, as America works faster, longer, harder, than ever before—eyes are under an increasingly heavy strain.

No wonder, then, that to preserve precious eyesight, more and more war plants are seeking not just good lighting, but the very best lighting at their command—cool, glare-free, shadowless fluorescent.

Ever since the first commercial and industrial use of fluorescent lighting, Sylvania's leadership has been based on its progressive technical developments—in scores of such factors as cathode construction, gas pressure control, precise mercury measurement (the "Mercury Bomb"), blending and applying fluorescent powders, etc. These continuous advances have produced Sylvania Lamps which today deliver these results:

They give more light, more lumens per watt; they are longer-lived; they have a more uniform coloring; they have a finer, smoother coating.

Most important, these lamps give you more than twice the illumination you get from incandescent lamps—for the same wattage! It's possible to double your illumination on your existing wiring circuits.

Sylvania Lamps work well in any type of fixture. Of course, they're at their best in a complete Sylvania "package" in which lamp, fixture and accessories operate as an harmonious unit.

Priority ratings for these complete fluorescent systems can be obtained wherever it can be shown that better lighting would speed essential war production. Our representative will gladly assist you in filling out the necessary forms. A line will bring him to you.

**SYLVANIA**  
**ELECTRIC PRODUCTS INC.**

formerly Hygrade Sylvania Corporation  
Salem, Mass.

*Incandescent Lamps, Fluorescent Lamps, Fixtures and Accessories, Radio Tubes, Electronic Devices.*

**Miralume Fixture HF-100P with composition reflector.** There is a complete line of Sylvania Fluorescent Fixtures available to fit any industrial need. From the standpoints of economy in use of critical materials, color and quantity of light, and light distribution, these fixtures provide the last word in fluorescent lighting efficiency. They are obtainable, on priority, by plants engaged in war work—upon proof of genuine need for better lighting.



## One End of a Pipe Line 2000 MILES LONG

HERE is America's answer to the threat of Axis submarines—an endless train of tank cars, a moving pipe line that reaches all the way from the oil fields to the East.

Hundreds of trains like this are rolling swiftly over the Erie these days—bringing heat to the homes of America, fuel to its factories, and gasoline to its war-essential automobiles.

Since last year, Erie and other American railroads have increased their shipments of oil from 12,000 bbls. a day to 850,000 bbls.! This is what we mean when we say,

"We will keep 'em rolling."



the most of charges that A&P bilks the consumer through shortweight—charges that are at least as old as the ten-year-old Federal Trade Commission investigation of chain stores.

Again, the familiar allegation that A&P has methodically driven other competitors out of business, notably the corner independent who was long a familiar character of the neighborhood, could also be calculated to stimulate a fair amount of public support for the antitrust action.

Still another line of attack—an assault on its private brands as instruments of monopoly (its coffees are the biggest-selling brands in the country)—could be figured to enlist the support of the manufacturers of powerful, nationally advertised brands.

One more weak spot in A&P's armor is its subsidiary, the Atlantic Commission Co., whose brokerage operations in the produce field have long been under Federal Trade Commission fire. FTC won its argument that Atlantic Commission violated the brokerage provisions of the Robinson-Patman act in diverting commissions that it received on goods purchased for the A&P account (as distinct from those sold to other food retailers), but neither FTC or the Justice Department have been too well satisfied with Atlantic Commission's operations on other fronts. For example, when Atlantic Commission interested itself in the formation of a giant grower combine, the Cooperative Fruit & Vegetable Assn., all of whose output Atlantic would agree to market, the Justice Department was more than casually curious.

While the Dallas storm was brewing, Atlantic formally canceled its first contract with the amorphous co-op (BW-Mar.21'42,p54), but it's common trade gossip that Atlantic hasn't relinquished its interest in the combine. This report walks hand in hand with the always prevalent dark talk of how Atlantic uses its widespread penetration of the produce markets to manipulate prices. In an attack on this front, many growers and competitive retailers would be more than willing to uphold Arnold's arms.

On the sheer ground of size, A&P is, of course, most vulnerable of all. Bigness always makes a fine target, and A&P over the years has grown steadily bigger—depressions, chain store taxes, Robinson-Patman acts, and anti-loss leader laws notwithstanding. In fact, this succession of adversities has only forced the big chain to find new and more economical methods of selling, which in turn have only added to its size. Thus, only half a dozen years ago, A&P was reported to have 16,000 stores (it never reveals the exact number of its outlets); while the accepted figure in the trade today is just a little less than half that. Has A&P volume been similarly halved? Not in the least. The super-

# "BOTTLE CAP" TIRES FOR ICE

Alaska and our other northern outposts are lands of vast distances, great wastes of ice and few roads . . . hence, peculiarly the sphere of the airplane. But how to stop a 13-ton warplane landing at 100 miles an hour on glare ice was a problem . . . a problem the Army brought to United States Rubber Company tire engineers. They succeeded in developing the unique "U. S. Ice Grip Tread." Reports indicate that it stops a plane as fast on ice as an ordinary tire does on a dry concrete runway.

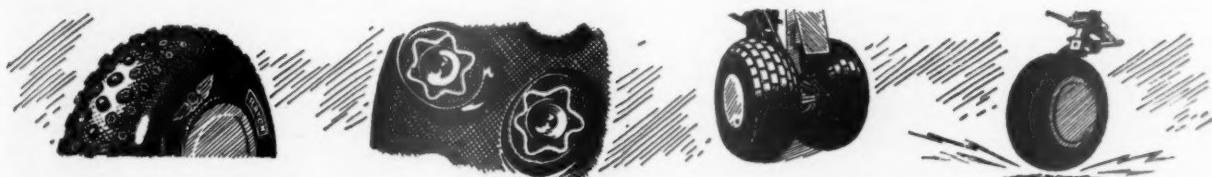


## HOW U. S. ICE GRIP TREAD STOPS PLANE

STEEL INSERTS, crimped like bottle caps, are imbedded in the rubber. When landing, the rubber around these "bottle caps" is depressed, thus exposing their sharp metal edges. SHARP EDGES bite into the ice or snow and keep the tires from slipping or skid-

ding. But this is only one new development in the line of U. S. Royal Rayon airplane tires. DUAL WHEELS were suggested by "U. S." engineers to carry the terrific loads of the transport planes—so heavy that few airports had runways strong enough. Now these big

cargo and transport planes can take off and land in many more fields. Another new "U. S." development is the tire for tail or nose wheel that GROUNDS STATIC, allowing the high charge of static electricity to ground without a spark.



The Ice Grip Tire, like all U. S. Aviation Tires, is built of rayon. They are stronger than cotton-cord tires, safer because more impervious to heat, and last longer. United States Rubber Company—pioneer in rayon for a decade—has developed a "safety bonding" process that makes rubber stick to rayon better than it does to cotton. After the war you'll have long-wearing U. S. Rayon Tires for your car as well as your plane. If you can buy new tires for passenger cars, insist on U. S. Royal Master or U. S. Royal De Luxe; for farming: U. S. Farm Tires; for bicycles: U. S. Bike Tires; for trucks: U. S. Royal Fleetway or U. S. Royal Raymaster.



## UNITED STATES RUBBER COMPANY

1230 Sixth Avenue • Rockefeller Center • New York

...AND IN AMERICA'S WAR  
PRODUCTION MACHINERY



**I**N OTHER YEARS, production machinery had a comparatively easy time of it—even for this country, birthplace of mass production. But nowadays, plant equipment is subjected to extremely heavy intermittent loads, hums faster than in any peacetime period.

To keep the nation's war production moving at top speed around the clock, tougher materials had to be developed . . . many machine parts redesigned. But the only "change" industry required of the Torrington Needle Bearing was its conversion to war production. In the heavy-duty machinery of America-at-war, this unique bearing is again proving its adaptability—in applications where its definite advantages mean more than ever.

Its low coefficient of friction is assuring smooth performance . . . its high capacity and efficient lubrication are reducing the need for replacement or maintenance, enabling

management—through steadier production—to turn out greater quantities of war equipment. From the standpoint of the machine builder, the Needle Bearing's small size, saving space and critical materials, and its remarkable ease of installation, cutting assembly time, mean faster delivery of production machinery to wartime assembly lines.

And so it is easy to see why the Needle Bearing was one of the first machine parts to "change over" and why, too—with the war production program increasing in volume and intensity—no further change has been necessary.

*IN ADAPTING the advantages of the Needle Bearing, the experience of Torrington's Engineering Department is at your disposal. An application book lists many typical uses. Write for your copy today.*

**THE TORRINGTON COMPANY**  
TORRINGTON, CONN., U. S. A. • Established 1866  
*Makers of Needle and Ball Bearings*

New York      Boston      Philadelphia      Detroit  
Cleveland      Seattle      Chicago      Los Angeles  
San Francisco      Toronto      London, England



**TORRINGTON NEEDLE BEARING**  
*Every feature fills a wartime need*

market operation into which A&P has been forced, merging two or three little units into one big super, has paid out handsomely. In the fiscal year of 1936, ended the last of February, sales totaled \$842,015,871. Last Feb. 28, A&P reported sales of \$1,378,147,240.

## Victory Plan

**N.I.A.A. maps program to give the industrial advertising man a comprehensive blueprint for successful war drives.**

While the industrial advertising man has been doing a vital and effective job in campaigns for scrap salvage, materials conservation, increased production, and war bond and stamp sales, he has worked almost independently—almost without blueprints.

Members of the National Industrial Advertisers Assn., having participated in all these drives, are launching a new Victory Plan to consolidate past successes and aim at new ones.

• **Four Goals**—Organized by N.I.A.A. Vice President Wilmer Cordes of American Steel & Wire Co., Cleveland, the Victory Plan calls for pooling and exchanging ideas to achieve four objectives:

(1) Increased war production through direct worker appeals via posters, contests, suggestion boxes, and house organs. Chairman—Morgan Fenley, publicity director of Eaton Mfg. Co., Cleveland.

(2) Expanded personnel training by pooling methods of many companies to set up rapid, efficient schooling programs. Chairman—Vice President Lansing Moore of Holden, Stedman & Moore, Inc., Detroit.

(3) Promotion of constructive and instructive advertising that will aid management in its work. Chairman—Edward H. Peplow, Jr., sales development manager, John A. Roeblings' Sons Co., Trenton, N. J.

(4) Organization of conservation and scrap salvage programs in plants and industries by the exchange of ideas and methods. Chairman—Sales Manager Walter H. Gebhart, Industrial Division, Henry Disston & Sons, Inc., Philadelphia.

• **Local Committees**—Participating in the nation-wide program are 2,000 N.I.A.A. members of 25 chapters, which are setting up local committees to gather case histories and statistics of successful local campaigns—with division chairmen serving as clearing houses for the pool and exchange. Advertising men and industrialists see special benefits in the plan for manufacturers who have made radical conversions to new wartime production fields.

## New Nugent Plan

Installment-in-reverse idea is revised to circumvent some criticisms. Method of collection undergoes an alteration.

Rolf Nugent, whose Nugent Plan (BW-Jul.18'42,p67) has been in hiding for the past couple of months, will issue a revised version in the near future.

As before, the main thesis is "installment-selling in reverse"—that is, creating an outlet for excess purchasing power by letting the consumer pay now for merchandise he won't get until after the war is over. But in many a detail, Nugent has rewritten his plan to get around previous criticisms.

• **Collection Method**—As things shape up now, the most notable alteration is in the method of collecting installments. Originally, Nugent had suggested that whenever a dealer made a durable goods sale (for a commission of 6% of the sales price), a finance company would collect the remaining instalments (for a 1% fee).

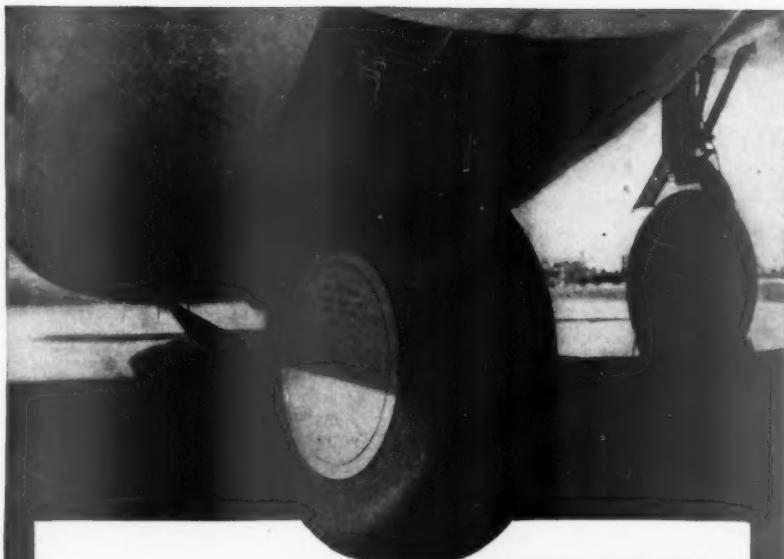
This has been changed to put some of the burden of collecting on phone companies, utilities, post offices, and telegraph services. Instead of a commission, these agencies would be paid a flat fee of 7¢ an item (the same fee Western Union gets from General Motors Acceptance Corp. for collections).

• **Disinterested Parties**—Reason for bringing the utilities and telegraph companies into the picture is that they are disinterested parties. Some Nugent critics had expressed the fear that sales finance agencies would urge the consumer to buy over his head, then start lending him money to keep up with the installments.

In making the revisions, Nugent called in a group of advisers—mainly experts from merchandising, manufacturing, advertising, and government circles. His next step will be to publicize the plan, thereby hoping to sell the government on the idea.

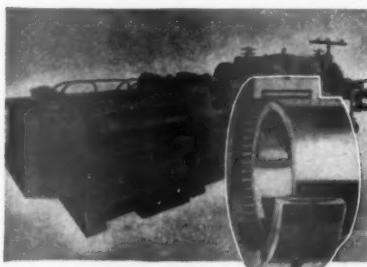
• **Dealers' Attitude**—Business-management acceptance is not deemed the problem it was a few months ago. Dealers had at first praised the plan to the skies as a wartime life-saver, then quickly cooled off when they realized that it implied postwar allocation of merchandise and maybe postwar price control.

But lately more and more business men have come to feel that some measure of control is inevitable for a time after the war anyhow, and so they again are inclining favorably to Nugent. One auto manufacturer has put in a bid to get first whack at the plan when and if the government will agree to issue the necessary bonds.



## IN THE NEWS WITH BANTAM BEARINGS

**HALF A TON OF LANDING GEAR** on giant bombers—and the entire mechanism must fold smoothly back into the wing when the plane takes off. Bantam Needle Bearings contribute to dependable operation of the "Up-Latch" that locks the huge gear in flight position—and this is just one of the ways that the many types of Bantam Bearings are helping to assure the successful functioning both of the weapons for Victory and of the machines that produce them.



**FAST, PRECISE FINISHING** of steel bars and tubular products is the job of The Medart Company's centerless bar turners. Unusual engineering features in these machines include an ingenious feeding device combining hydraulic and mechanical action, and a novel application of standard Bantam Quill Bearings in cam rollers on the feeding grip jaws.



**RIGID LABORATORY CONTROL** contributes to the successful performance of Bantam Quill Bearings—the unusual anti-friction bearings that combine high radial load capacity, small size, ease of installation and lubrication. Samples from daily production runs are regularly tested to assure close adherence to metallurgical and machining specifications.

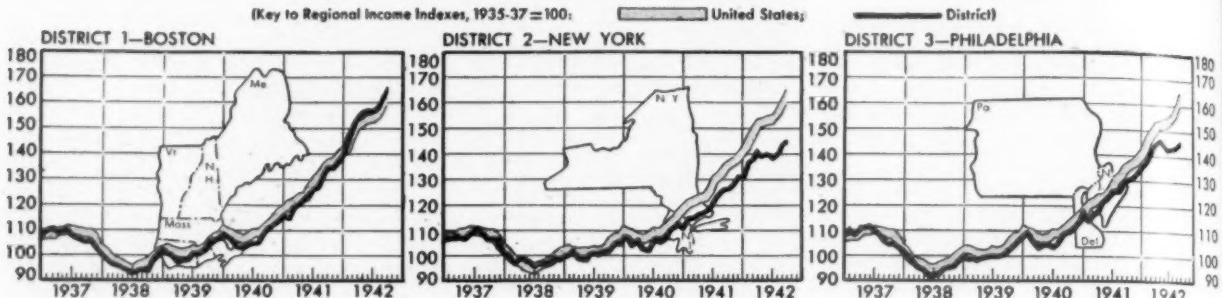
**HAVE YOU A NEW BEARING PROBLEM?** Let Bantam engineers show you how one of the bearings from Bantam's comprehensive standard line—including straight roller, tapered roller, needle, and ball—can be adapted to your requirements—or if special bearings are needed, they will design them to fit your applications. For helpful bearing advice, TURN TO BANTAM.



**BANTAM BEARINGS**  
STRAIGHT ROLLER • TAPERED ROLLER • NEEDLE • BALL  
BANTAM BEARINGS CORPORATION • SOUTH BEND • INDIANA

# THE REGIONAL MARKET OUTLOOK

A summary of trends affecting income prospects in the 12 Federal Reserve districts, together with Business Week Regional Income Indexes for most recent month, last month, and a year ago. (Last month's report: BW—Oct. 5/2, p. 66.)



- Boston**—War economics continues to accentuate income contracts within New England while, withal, district averages remain closely in line with the nation's. Non-agricultural employment is running below last year's in Vermont, New Hampshire, and Rhode Island, as a result of cuts in textile, shoe, tourist, jewelry, and other consumer goods activity. Maine is up sharply, with Connecticut now merely pacing the nation, and Massachusetts job rolls lagging a bit, particularly in eastern cities of the state.

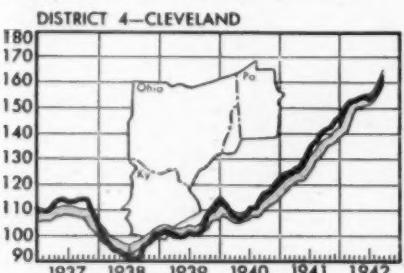
Bumper potato returns have also boosted Maine's farm receipts, whereas elsewhere income is up less than average. Growing labor shortages now may also limit the agricultural economy. Springfield, Mass., Portland, Me., and Hartford and New Britain, Conn.—typical of the concentration of war production within the district—are particularly short, but shipbuilding is expanding swiftly around Boston and Providence.

- New York**—In the Buffalo industrial area, schedules call for sharp increases in employment, particularly in aircraft. There is even now, however, a labor shortage there. Similar situations are due for Rochester, Syracuse, Utica, Schenectady, other upstate New York cities, and northern New Jersey war centers. Indeed, shipbuilders at Kearny, and engine plants in and around Paterson are drawing from New York City's enormous unused labor reserves.

There, at the opposite end of the district from Buffalo, cumulative repercussions of war upon clothing, financial, construction, luxury service, and other employment continue to offset war-born gains in precision, aluminum, and miscellaneous arms work. Shipping activity has disappointed, and some shipbuilding facilities are not fully utilized. Still, growing stringencies elsewhere may yet cause Washington artificially to divert projects to the metropolis.

- Philadelphia**—With hirings over the next six months estimated to run 15% of current job rolls, income potentials here are still on the upbeat, although less sharply than the nation's. Machinery and ordnance lines continue to outrank aircraft and shipbuilding in labor demands here. Geographically, the arms concentration is in the Philadelphia industrial area—Camden, Chester, Norristown—and the industrial cities rimming it, like Wilmington, York, Harrisburg, Allentown.

Light goods lines, however, are less active than last year, farm gains have trailed other regions', and the district's perennial laggard, anthracite, is only 5% ahead of 1941 in output. And at Altoona-Johnstown in the west, operations run stable in coal, steel, and car repair. With armament gains thus strongly tempered, the district as a whole compares none too favorably with other regions in sales potentials.



DISTRICT 6—ATLANTA

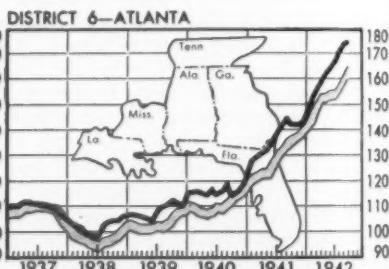
- Cleveland**—Although some new plant awards still are flowing here—to Warren, Erie, Fairport—major district industry attention is focused on materials shortages, and intensifying labor stringencies. Manpower is tightest in northern Ohio, but reserves actually exist around Wheeling, W. Va., and Zanesville, O., and Portsmouth, O., and Lexington, Ky. Income potentials vary in inverse correspondence to the labor supply.

Machine tool output is tending to stabilize, as has coal and steel for some time past. Apparel lines have been hit, as elsewhere, and glass, both for containers and flat types, is off. Nonetheless, predominant war lines are still accelerating, and farm income has also kept pace with the nation's except in parts of Kentucky, which is also laggard industrially. District income, still on the rebound from conversion, may soon again pass the country's average.

- Richmond**—New military awards still account for measurable gains in district income prospects. Latest projects are to be at or near Quantico, Va.; Roxboro-Oxford, Hoffman, and Monroe, N. C.; Orangeburg, and Union, S. C. Industrial operations in the southern part of the district, however, are largely stable, and labor surpluses persist all through inland towns like Greenville, Charlotte, and Richmond.

In contrast, housing and labor shortages have retarded expansion at Hampton Roads, as well as at Baltimore, where population has jumped 15% from 1,000,000 a year ago, and nearby Essex-Middle River, up 50% to 36,000 since 1941. Washington is still transferring offices—to Asheville and Winston-Salem, N. C., in latest moves.

Farm prospects continue exceptional in the Carolinas, where cotton and tobacco are up sharply from 1941. Except for "hot spots," rural potentials there surpass urban.



- Atlanta**—Soaring cotton receipts and mounting military payrolls dominate the income picture in this southern region, lifting over-all gains in recent months. Result has been a relative emphasis on potentials in rural areas and military centers. Industrial activity for the most part, however, has not gained as much as in manufacturing districts, except at shipbuilding cities like Savannah, Brunswick, Jacksonville, Mobile, and Pascagoula, and some few inland arms towns like those in northern Alabama.

Labor for farming is getting tight in some sections, but in many of the bigger cities, surpluses persist. This may lead to more war contracts, like that for air cargo craft recently given to Higgins at New Orleans, and for airplanes some months ago to Atlanta. Florida resorts not yet boomed by military training will suffer this winter as gasoline rationing cuts travel—Orlando, Sarasota, Palm Beach, etc.

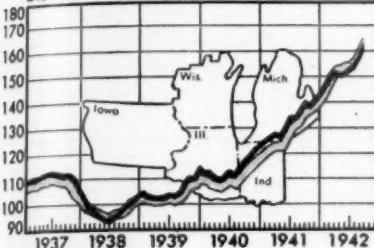
Regional Income Indexes (September figures preliminary; August, revised)								
District	September	August	September 1941	District	September	August	September 1941	
United States	165.2	162.0	137.8	United States	165.2	162.0	137.8	
District 1—Boston	166.7	163.0	135.6	District 7—Chicago	163.6	158.9	140.2	
District 2—New York	145.5	144.0	127.2	District 8—St. Louis	174.9	172.4	141.7	
District 3—Philadelphia	146.5	144.3	131.5	District 9—Minneapolis	158.7	159.0	133.6	
District 4—Cleveland	163.8	160.1	142.5	District 10—Kansas City	166.6	160.3	126.2	
District 5—Richmond	182.2	178.7	149.9	District 11—Dallas	181.7	178.7	143.4	
District 6—Atlanta	175.6	174.6	142.9	District 12—San Francisco	190.5	186.2	148.3	

(Key to Regional Income Indexes, 1935-37 = 100:

United States;

District)

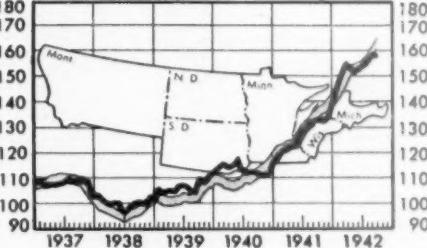
### DISTRICT 7—CHICAGO



### DISTRICT 8—ST. LOUIS



### DISTRICT 9—MINNEAPOLIS



• Chicago—Michigan and other auto centers, headed by Detroit, now lead the district in urban payroll gains, surpassing Indianapolis and Fort Wayne, and the downstate Illinois towns of Rockford, Joliet, Springfield. Chicago's boom—based more on giant new works than on conversion—is a bit slower in coming, and the Milwaukee industrial area has yet to pass through additional conversion dislocations under the agricultural equipment program. On the whole, however, district income payments are still advancing faster than the nation's, regaining pre-Pearl Harbor standing.

Potent factor in recent months has been the better-than-average increase in farm income, based largely on hog, poultry, dairy, and other livestock receipts. Crop harvests, too, have been good. However, labor shortages not only threaten to limit industrial output, but even now are cutting into Wisconsin dairying and Iowa hog-raising.

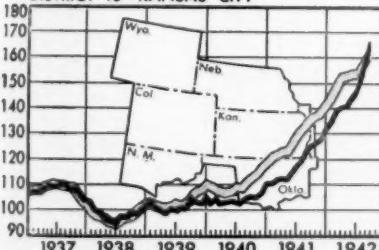
• St. Louis—Agricultural and industrial conditions in this inland Reserve district, while maintaining district indexes somewhat above the nation's make for uneven income potentials. While Missouri's livestock industry and southern cotton growing are yielding rich returns, Kentucky's tobacco crop is no bigger or better than last year. Too, outside Louisville and St. Louis, where war work is mounting so fast as to be endangered by labor shortage, most northern towns have few arms contracts. And in the south, Mississippi non-farm jobs are off from last year, whereas in nearby Arkansas, employment is up more than 20%.

Altogether, prospects, rather than current returns, are not overly favorable. The flow of new war awards here has topped off, and now lines like shoes are being hit. Since farm output is already high, no spectacular gains are looked for. Income may drop back towards the national average.

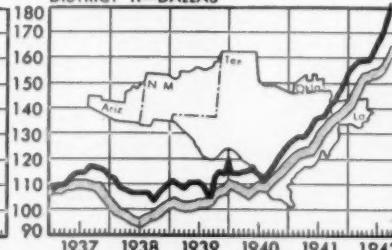
• Twin Cities—Though recent weather hasn't helped potatoes and beets, the crop season turned out well on the whole, with wheat and corn up some 10% from 1941, and oats, barley, rye, and flax up about 40%. More, dairy and livestock receipts have been the mainstay of farm income, particularly in Minnesota and central Wisconsin. Nonetheless, farm income generally has hardly outstripped the nation's, and with industrial activity here little stimulated by the war, relatively, it is no wonder that income indexes are trailing a bit again.

Jobs on the iron ranges will be more numerous than usual this winter, but the seasonal letdown will be felt nevertheless. Twin City employment is not due for any new upsurge until spring, when ordnance plants will be completed. Only Duluth-Superior shipbuilding is apt to maintain one-way expansion through the winter. Elsewhere there is little arms work.

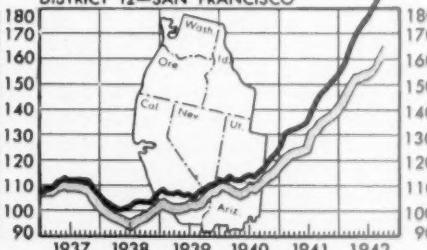
### DISTRICT 10—KANSAS CITY



### DISTRICT 11—DALLAS



### DISTRICT 12—SAN FRANCISCO



• Kansas City—Income indexes now reflect the flowering of this region's progressively advancing agriculture and industry. Fine cotton yields, and a corn crop one-third better than last year's top off previous excellent wheat harvests. Minor crops—sugar beets, dry beans, soybeans, peanuts—also help receipts. And dairy and livestock products—chief district output—have led the farm income advance, which has been average in Wyoming, Colorado, and New Mexico, and above in Nebraska, Kansas, and Oklahoma. Soaring arms work is now being reflected in prospective labor shortages among the major district centers. Farm labor is also growing short as a result of the drain to non-agricultural pursuits, reflected in sharply better-than-average employment gains here, except for Wyoming and New Mexico. With numerous factories still under construction, peak payrolls are still some time off, and district income will outstrip the nation's.

• Dallas—With ranges lush, prices high, and cattle fat, farm prospects are assured in the western sections of this district, and the 30% gain over last year in the cotton pick guarantees rural potentials in the east. Industrially, despite the decline in oil drilling, production, and refining, employment is up 15% from 1941, twice the national gain. Reflecting this coming expansion, and also the concentration of military training projects in the region, construction contract awards are 80% higher than last year, also twice the national gain.

The manpower pinch, however, is threatening future advances in both agriculture and industry, particularly along the Gulf Coast, around Beaumont, Houston, and Freeport, and in northeast Texas, from Waco and Dallas east. These, of course, are the areas of greatest previous employment and payroll gains, largely responsible for district indexes outgaining the nation's.

• San Francisco—Possibility that this western region has had the bulk of its war expansion is now seen in the growing manpower stringency here. Aircraft employment is tending to reach a peak, with new factories going to other regions, and just as soon as big new shipyards are staffed in the spring, it may be that payrolls will begin to stabilize. Pressure of the shortage on lumbering, mining, and agriculture in this district has already been acute, and reserves on the coast in central California will also soon be exhausted.

Nonetheless, current activity in all fields—including shipping, petroleum, movies—remains at high levels, as befits the nation's top-ranking district. Agricultural output continues to gain and farm income this year has more than kept pace with that for other regions. Industrial gains, of course, have been exceptional all along the Pacific Coast particularly.

## Less Leg Lure

Supply of nylon hosiery isn't as big as OPA says in fixing prices. From now on, it's all rayon and worse rayon.

The words and deeds of OPA concerning nylon stockings last week made a splash in the press and poured new animation into standard feminine conversation. But it wasn't much, if any, easier to buy nylons. And a good many factors in the hosiery trade, already bedeviled by WPB and OPA orders, had an extra grudge against official Washington.

The new nation-wide ceiling price (\$1.65 for most commonly sold full-fashioned hose; \$1.55 to \$2.50 for other top grades) went into effect Oct. 22, accompanied by promises of nylon for the Christmas gift trade and by OPA's statement estimating manufacturer's "hoarded" stocks at 3,600,000 pairs.

• **Question of Supply—Stocks** in the hands of jobbers and retailers are estimated at anything from a few thousand to 1,000,000 dozen pairs. Whatever the exact figure, one thing is sure, and that is that merchants aren't going to reveal the secret by placing the last of their most precious leg art on the counter in a lump right now. As far as they are concerned, it's not just a case of avoiding a stampede like the one that followed silk allocation (BW—Aug. 9 '41, p24); this time there wouldn't be enough to go around—not anywhere nearly enough.

So leading department stores have been telling customers they had no nylons. Some of them haven't; others are playing their own little game of rationing by filling orders to their best charge account customers, in no case allowing them more than two pairs. Only in one particular has the OPA price order helped thaw nylon stocks: Stores that may have been saving the last for Christmas sales won't do that now that they can't rely on getting premium prices of \$3.95 or more a pair.

• **No Hoarding**—Unlike the retailers, producers know what stocks they have, and aren't afraid to tell that it's about 162,000 doz. pairs.

"Dozens of pairs" is the established unit of quantity in the hosiery industry, and manufacturers object to OPA's talking in terms of millions of individual pairs instead of using the accepted trade terminology. Worse than that, they accuse OPA of deliberate misstatement in setting the inventory figure about twice too high—3,600,000 pairs instead of about 1,944,000 pairs.

Finally, they resent the accusation of hoarding because present stocks are only a drop in the bucket compared to nor-

mal inventories; sales used to run around 780,000 dozen pairs a month when producers got all the nylon they wanted, and stocks were usually almost twice that large. Since February of this year when stocks of all-nylon and part-nylon constructions combined were highest (1,225,251 dozen pairs), shipments have steadily exceeded production reducing manufacturers' stocks to 237,000 dozen pairs by the end of September and thence to present levels, for heaviest fall shipments are always made in October.

• **Silk, Nylon Vanish**—Just what kind of a wringer the hosiery industry has been put through in the past year is graphically illustrated by a comparison of shipment figures for September, 1942, and September, 1941. Total shipments are off only 8.1%—from 13,770,634 dozen pairs to 12,648,730—but since the industry has been completely cut off from all supplies of silk and nylon fibers, it's an entirely different kind of goods that is being shipped.

In the all-silk full-fashioned category, shipments declined from 1,671,690 dozen pairs to 15,030, a drop of 99.1%. The all-nylons suffered almost as severe a cut—from 700,261 dozen pairs to 20,348, a loss of 97.1%. To stretch their dwindling stocks of silk and nylon fiber as far as possible manufacturers early in the game turned to the use of rayon or cotton welts, but even this expedient is wearing thin; shipments of this type of hose with silk legs declined from 1,122,044 dozen pairs to 122,640

(down 89.1%) and those with nylon legs from 130,657 to 87,012 (down 33.4%).

• **Rayon the Mainstay**—Although cotton registers a nice gain of 416%—up from 39,094 dozen pairs of full-fashioned hose to 194,092 dozen—it is hopelessly outclassed in the September shipment figures by rayon with the phenomenal gain of 4,021% to a new peak of 2,522,551 dozen pairs.

Impressive as the rise of rayon is, its proportion to total hosiery output is bound to rise still higher. Currently it is estimated that 87% of all hosiery manufacture is rayon.

• **Further Cuts Foreseen**—But rayon is also needed for war uses. That, as much as anything else, explains why the industry is operating at only about 50% of capacity. Furthermore, there is the probability that the percentage will have to be cut even further. Thus far, the industry, which is only beginning to experiment with the use of acetates, has relied exclusively on the cuprammonium and viscose types of rayons, and these are the types on which Rubber Director Jeffers plans to draw to the extent of 50,000,000 lb. in substituting rayon for cotton in Army tires (BW—Oct. 31, '42, p19). Currently, hosiery men are guaranteed their rayon supplies by the requirement that rayon producers sell them 15% of their viscose and cuprammonium output not tagged for war uses, lend-lease, or South American export. As long as this 15% quota is maintained, the industry will get rayon equivalent to about 65% of its former consumption of silk and nylon yarns. But no one hopes to forestall the inevitable cuts.

So the outlook for the hosiery industry boils down to this: rayon, less rayon, and poorer quality rayon. Observers expect the shortages to show up at the retail counters after the turn of the year. Price ceilings are promised then, and rationing may necessarily have to follow.

• **Heavy Grades Arrive**—With the deterioration of the rayon quality situation, half a hundred mills have already resorted to the heavy 100 denier yarns. Last week, even the powerful Gotham Hosiery Co. was forced to turn to heavy rayon models, which it is promoting in terms of the new "opaque trend."

Fashionwise these stockings resemble the ingrained shiny silk hosiery popular 20 years ago and are being shown in brown, black, and navy blue.

The heavier hose "wear longer" than 50 and 75 denier stockings now on retail counters, which correspond to 3 and 4 thread silk stockings and are woven on similar fine gage machines. This equipment can and has been adjusted for 100 denier yarns, but 150 denier is next, and it requires coarse gage machines many of which have already been scrapped.



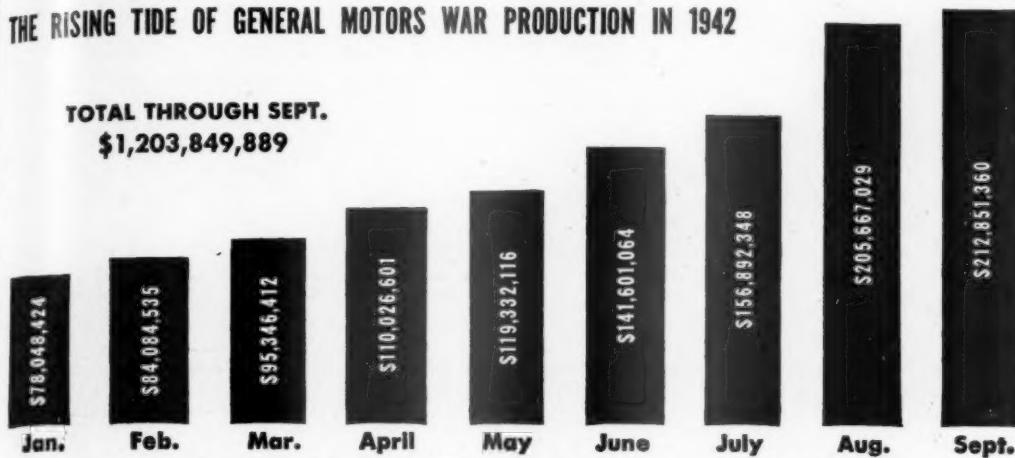
### RENDEZVOUS FOR RUNS

One of the first donations to be placed in a red, white and blue barrel which was set on the sidewalk in front of a Knoxville (Tenn.) store in anticipation of the national hosiery salvage campaign, was a single lot of 70 pairs of silk hose, which had been stockpiled by the donor for quilt material.

## THE RISING TIDE OF GENERAL MOTORS WAR PRODUCTION IN 1942

### TOTAL THROUGH SEPT.

\$1,203,849,889



War products made and delivered by General Motors prior to 1942—\$483,855,014

### EMPLOYMENT AT ALL-TIME PEAK

More men and women are working for General Motors in the United States and Canada than ever before—341,469 in all—and our payrolls are increasing at the rate of over 4,000 a week. For the week ending October 11th, average hours worked were 46.5, compared to 40.5 last year.

### SUPPLIERS AND SUBCONTRACTORS DOING HALF THE JOB

Since half the job is being done outside our plants by our suppliers and subcontractors, they are employing an additional 300,000 or more as their part of this war effort. Their effort and employment must continue to increase with ours.

### VALUABLE TIME AND MATERIALS SAVED

Hundreds of improvements effected by

General Motors production men and engineers are saving millions of productive hours and thousands of tons of critical materials. Through the General Motors Suggestion Plan the factory workers are also doing their part and have made more than 4,000 constructive suggestions, for which they have received awards in War Savings Bonds.

### ALL PLANTS AT WORK ON WAR PRODUCTION

The 104 General Motors plants and operating units in 46 cities and 13 states are all on war production. So are the five General Motors plants in Canada. Every General Motors employee in our laboratories, factories and offices is working for victory. *From this production army comes an ever-growing volume of weapons, munitions and equipment for our Army, our Navy and our valiant Allies.*

# GENERAL MOTORS

*"Victory Is Our Business!"*

THE AMERICAN WAY WILL WIN

**Now—Kemmerer  
gives you the  
FACTS ABOUT  
INFLATION  
and how to  
control it!**

\* Do you know how much inflation affects you . . . personally . . . commercially . . . politically?

\* Exactly what is this force that throws our economic system out of balance?

\* How does it work?

\* Where is it leading us?

\* Can it be controlled successfully?

\* How does it affect your earnings, investments, business, buying power, living costs, insurance, pension, representation in government?

HERE is a simplified yet authoritative explanation of inflation, what it means to every person in the U.S., and the specific steps that must be taken to stop it. Its causes are viewed from both the monetary and commodity angles and the more important results are examined for their impact on our American way of life. Inflationary trends are discussed together with the methods of control being applied and advocated.

**JUST  
OUT!  
THE A-B-C OF  
INFLATION**

By Edwin Walter Kemmerer  
Walker Professor of International Finance  
Princeton University

174 pages, 5½x8, 7 charts, \$1.75

In this new book the author compares the present situation with inflations during previous wars, criticizes monetary legislation likely to lead to further inflation, examines the broad aspects of currency supply and demand, discusses prices, and explains the reasons for differences in price advances.

The relation of inflation to debts, interest rates, foreign trade, wages, social welfare endowments, and democratic government, is clearly covered. General methods of controlling inflation and various plans of price regulation are also concisely described. The book ends with a review of the developments of early 1942 and a statement concerning the future.

**SEE IT 10 DAYS**

McGraw-Hill Book Co., 330 W. 42nd St., New York  
Send me Kemmerer—The A-B-C of Inflation for 10 days examination on approval. In 10 days I will send \$1.75 plus few cents postage, or return book postpaid. (Postage paid on cash orders.)

Name .....  
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City & State .....  
Position .....  
Company ..... BW-11-7-42

# PRODUCTION

## Plastics Parade

With as many as 5,000 different formulations, U.S. still is short of most of these war-needed compounds.

WPB's new General Preference Order M-240 covering the vinyl acetate monomer (used not only to produce rubber substitutes, but sulfa drugs) and the latest revision of M-10 covering vinyl polymers and copolymers (Koroseal, Formvar, Saflex, Saran, Tygon, Vynilite, Vinyon, etc.) go into action this week, yet alter the current plastics situation not enough to stick into your eye.

• **High Priority Business**—True enough, governmental control is shifting from an alphabetical priority preference basis (AA, A-1-a, A-1-b, etc.) to straight allocations whereunder "no producer shall . . . deliver any . . . except as authorized or directed by the Director General of Operations." But practically all the vinyl plastics have long since been monopolized by military suppliers and other possessors of top priorities;

holders of medium and low priorities have known they meant nothing for months long past.

Meanwhile the governmental status of all other plastics (there are more than 100 tradenames, perhaps 5,000 different formulations, not to mention colors) continues pretty much as is. General Preference Order M-25, controlling priorities on "formaldehyde, paraformaldehyde, hexamethylenetetramine, and synthetic resins produced therefrom," regulates the formaldehyde-bearing thermosetting plastics (Bakelite phenolic, and urea, Beetle, Catalin, Durez, Plaskon, Resinox, Textolite, Melmac) and the casein and protein plastics (Ameroid, Gala, Galorn).

• **The Thermoplastics**—M-154, just amended Oct. 1, rules the thermoplastics from the acrylics (Acryloid, Crystalite, Lucite, Plexiglass) through the acetate, ethyl, and nitrate celluloses (Amerith, Bakelite acetate, Celluloid, Ethocel, Fibestos, Hercules ethyl cellulose and ethyl rubber, Lumarith, Nitron, Nixonite, Nixonoid, Plastacele, Pyralin, Tenite acetate and butyrate, etc.), to nylon (which is often erroneously considered only a textile fiber for glamorous stockings, military parachutes, personal and industrial brushes, because



## DEHYDRATED CONCRETE

Employing vacuum to remove excess moisture from newly-poured concrete floors in much the same manner as dust is vacuumed out of a rug, construction of a naval supply depot at Scotia, N. Y., has been greatly

speeded. Sections of plywood edged with rubber gaskets are laid on the fresh concrete, and vacuum lines, through which water is sucked, are attached. Within 10 minutes, it is claimed, smoothers may be pushed over the dried surface to remove whatever irregularities are there.



## Prelude to a

# Power Dive

A needle quivers, test results are checked, and the research engineers know that in the breathless moments of actual combat, American pilots can rely on plane performance. For an accurate knowledge of the strength of materials, and the distribution of stress in the finished plane, makes possible production shortcuts, material conservation and design developments.

Every great name in the aviation industry is a user of Baldwin-built testing equipment—from powerful hydraulic machines capable of exerting millions of pounds of pressure, to tiny electrical instruments weighing only an eighty-fourth of an ounce. Many of the design improvements that have made this country the world's leading air power have resulted from the use of this equipment.

Hydraulic presses, also built by Baldwin, have taken their place on aircraft production lines. Many

more are at work producing propellers, tires, self-sealing gas tanks, and plastic parts as well as sub-assemblies for other suppliers to the aircraft industry.

Locomotives, shipyard machinery, diesel engines and ship propellers are also vitally important regular products of Baldwin—now one of the principal builders of Army tanks and other ordnance materiel. Through the increased production of *all* of these products, Baldwin is helping to speed the day of final Victory.



# BALDWIN

The Baldwin Locomotive Works, Philadelphia, Pennsylvania: Locomotive & Ordnance Division; Baldwin Southwark Division; Cramp Brass & Iron Foundries Division; Standard Steel Works Division; Baldwin De La Vergne Sales Corp.; The Whitcomb Locomotive Co.; The Pelton Water Wheel Co.; The Midvale Co.

**Baldwin serves the Nation which the Railroads helped to build**

# Unbelievable!



## how WALLUSTRE hides

MAINTENANCE, with a minimum of interruption to operating schedules, is of utmost importance today. That's why the Devoe Laboratories developed Extra-Hiding High Gloss WALLUSTRE, the modern paint that does the job in just one coat.

Another reason why maintenance engineers specify WALLUSTRE for all interior wall surfaces is that its lasting whiteness insures proper reflection and diffusion of every bit of light available.

**Eight outstanding advantages make WALLUSTRE the maintenance paint for you to specify for your plant:**

1. One-coat hides black.
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4. Modern synthetic vehicle.
5. Tough — long lasting.
6. Brushes smoothly — easy to apply.
7. Ideal for spray application.
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If conditions in your plant indicate a paint with high resistance to moisture, fungi or fumes, your Devoe Maintenance Representative can help you select the specialized type you need.

Write today for pamphlet WL-22 describing the complete Devoe Wallustre Maintenance Paint Line.

*By improving sight with paint you help the National Safety Council's drive to reduce accidents and you build better morale among the workers in your own establishment.*

**DEVOE & RAYNOLDS CO., INC.**

The 188th year of the oldest paint-maker in America  
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there hasn't been any available for more orthodox plastic uses), to the vinyls previously enumerated.

M-27, controlling the phenols by allocation since Dec. 1, 1941, likewise rules phenol-furfural resin (Durite even though its oat—or cottonseed—derived furfural is a farm product, hence a favored material in farm bloc eyes). M-58, which allocates glycerine, indirectly controls the alkyd resins (Amerlac, Aquaplex, Beckosol, Dulux, Duraplex, Eterol, Glyptal, Lewisol, Makalot, Mirasol, Paraplex, Rauzone, Rezyl, Teglac, etc.), which enter so effectively into the whole field of lacquers, enamels, printing inks, etc.

• **NEEDED IN RUBBER PROGRAM**—The polystyrene plastics (Bakelite polystyrene, Catalin Laolin, Monsanto Lustron, Dow Styron) are controlled indirectly by M-170 which allocates styrene. (Though styrene is vinyl benzene, it is not a vinyl polymer, hence is not ruled by M-10.) As the new synthetic rubber plants swing into operation (Buna S is a compound of styrene and butadiene), supplies of the polystyrene plastics are likely to become as short as the phenolics.

In general, all the thermosetting plastics, which promised to relieve shortages of critical metals and other materials and are doing a yeoman job, are on the scarce side, but all of them need not be. Though the phenolics, with their high impact resistance, are in increasing military demand for everything from shell noses to tank helmets, the production of the various urea resins could probably be lifted by 30%.

• **COMPONENT NOT TOO TIGHT**—Though ammonia and formaldehyde, constituents of urea plastics, have been rigidly controlled since long before Pearl Harbor, both of the materials appear to be plentiful, and the manufacturers that compound them have excess capacity. They think that Washington has a habit of confounding the ureas with the phenolics. According to one industry spokesman, "they seem to feel they ought to curtail them both, despite the fact that it's the phenol in phenolics that is short, not the formaldehyde."

Except for the temporary presynthetic-rubber supply of polystyrene for "permissive civilian purposes" enumerated in order M-154, the only thermoplastics now available in quantity are the three celluloses. Acetate is more abundant than ethyl because of greater installed production capacity. Both are more abundant than nitrate, because it has to compete with military explosives for its nitric acid constituent. The cellulose part is limited only by the labor supply in cotton field, forest, and conversion plant.

• **FUTURE STILL IS VAGUE**—What the cellulose acetate situation will be next year is beyond statistical analysis. Increasing amounts of it are going into the trans-

parent blisters of planes (thus stretching the supply of acrylics) and other military uses. Until the Army, Navy, and WPB can make up their minds to the quantities of war matériel involved, and ease the figures through the cloud of censorship, no estimates are possible. The guess is acetate in comparative plenty.

Now that ethyl cellulose can be plasticized successfully into ethyl rubber (BW -Aug. 29'42, p53), and as soon as people discover that it can be used as a replacement for natural rubber in rings for home canning, in footwear, golf balls, what-have-you, there can easily be a shortage in 1943.

• **Casein Offers Some Help**—Casein plastics should be long, but they require a molding technique differing from that of feeding molding powder to a press and letting heat and pressure do their work. Vegetable protein plastics (soybean, cottonseed, etc.) are still pretty much in the development stage, may emerge in time to take up some of next year's slack.

Lignin plastics depend upon phenolic resins or others almost as scarce for complete success. Kys-ite, the ingenious blend of paper stock and phenolics, and Co-Ro-Lite, the equally ingenious mixture of sisal fiber and phenolics, will be limited in their application by M-27, if not by M-25.

• **Some Other Entries**—The acrylics will continue short, because new plant capacity for making them would require considerable amounts of stainless steel. The alkyls will be as plentiful as the supply of glycerine will let them. Cafelite, the coffee plastic, is still in the pilot plant stage in Brazil, will probably not be imported into this country until after South American markets are supplied. Vinsol, the resin made from natural rosin, is mainly used in the plastics industry in combination with other plastics.

During the past couple of years, the scope of the plastics industry has broadened beyond the rosiest dreams, hence the suppliers of raw materials have been faced with unexpected demands. Who, for example, would have prophesied that the material originally invented to substitute for ivory in billiard balls would be modified chemically to become the windows of gigantic war planes, or that the synthetic resin that appeared first in smoking pipe stems would be drafted for duty in the munitions of war? Or who could foresee that a synthetic silk developed for women's hosiery could become the cords and umbrellas of parachutes or the tapering bristles of paint brushes or the molded products of post-war years to come?

• **Competitor for the Hog**—Yet Du Pont announced last week that nylon paint brush bristles will shortly replace the natural bristles furnished by Asiatic hogs. Vinyon, one of the vinyls, is only waiting for a slackening in military re-



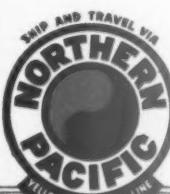
## How to make a rusty plow cut 3-inch armor plate

SOUNDS impossible? Not a bit! All you do is melt the plow. For example, an old plow weighing 100 pounds supplies enough scrap metal for twelve 75 millimeter armor-piercing projectiles!

This illustrates why Uncle Sam is urgently asking everybody to turn in old iron and steel. In response, the people of the Northwest, in towns, in cities and on farms, are going *all out* in salvaging scrap.

In 1941, 177,985 tons of scrap rolled East and West over the Northern Pacific Railway. In the first six months of 1942, another 111,263 tons swelled this total.

In addition, Northern Pacific's own shops and yards have yielded, since Pearl Harbor, 50,000 tons of old metal. This scrap, together with commercial scrap collected along our line, is moving swiftly to steel furnaces over the "Main Street of the Northwest."



"MAIN STREET OF THE NORTHWEST"

uirements to replace rubber elastic in men's gulluses and women's girdles. Koroseal, another of the vinyls, awaits the same happy day to replace rubber in heels.

Plastics of several types, but principally phenolic and urea, combine in various ways with wood veneers to produce such basically new high-strength materials as plywood, impreg, and compreg (BW-Oct. 31 '42, p38). Plastics combine with paper, cloth, sawdust, or other everyday materials to make vital airplane parts. It is no pun to say that the sky is the ceiling for plastics. There are already many plastic ceilings and walls and furniture in homes and office buildings, and more are bound to come.

• Two Newcomers—Two comparatively new plastics are being watched carefully

by the industry: C.R.-39, a brand new formulation of the Pittsburgh Plate Glass Co. (BW-Oct. 17 '42, p86) with "resistance to abrasion . . . 10 to 20 times greater than other clear plastics"; Melmac, a melamine-formaldehyde compound, developed by American Cyanamid and kept pretty carefully under wraps because of its military importance.

C.R.-39 the formula of which is secret, but which probably is a petroleum derivative, requires practically no pressure for its production into sheets, laminations, or forms, because it is a liquid which solidifies in the presence of heat and a catalyst. Melmac has such superior dielectric strength, dimensional stability, and arc resistance at high altitudes that it is a natural for the electrical parts of airplanes.

• Something New in Buttons—At the same time it is so resistant to soap, water, and color change that it is being adopted for buttons on the cotton underwear of soldiers. Urea buttons, replacing brass buttons on private's uniforms, have been selected for their resistance to dry cleaning, but Melmac would probably have done the whole soldier buttoning job if it were more plentiful.

## Tinplate by Radio

Westinghouse process of polishing electrolytic tinplate by radio wave fuses mirror-like surface in split second.

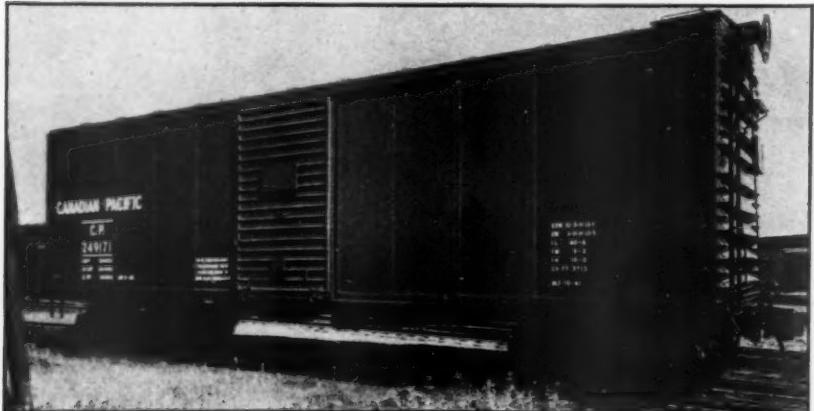
How to spread the nation's precarious supply of tin as far as possible is a problem confronting the tinplate industry. This has spurred development of the continuous electrolytic method of making tinplate for it requires only  $\frac{1}{2}$  lb. of tin for every 100 lb. of steel sheets—just one-third the amount formerly needed when practically all tinplate was made by dipping individual steel plates into molten tin.

• Speedy Process—Now Westinghouse Electric & Manufacturing Co. has announced a new radio, or high-frequency, method of fusing the tin on the plate and closing up any pits, or voids, on its surface as the final step in making electrolytic tinplate. Radio waves, broadcast at the rate of 200,000 per sec. from a length of coiled copper tubing, fuse the tin and put a bright mirror-like finish on a strip of dull tinplate as it emerges from the plating bath. In test runs, the new process was applied in one-tenth the time previously required by enormous furnaces or vast vats of hot palm oil.

The process already is at work in a large steel mill, producing about 60 tons of tinplate a day—a considerable increase over the old rate.

• Devised by Engineers—Use of radio waves to heat the tin coating to a point where it flows evenly over the steel strips was conceived by Glenn E. Stoltz, veteran manager of the metal-working section of the Westinghouse engineering department. Two younger engineers put the idea into practice—R. M. Baker, research engineer, carrying out the actual experimental work, while Milton P. Vore, design engineer at Westinghouse's Baltimore Radio Division, developed the necessary radio apparatus.

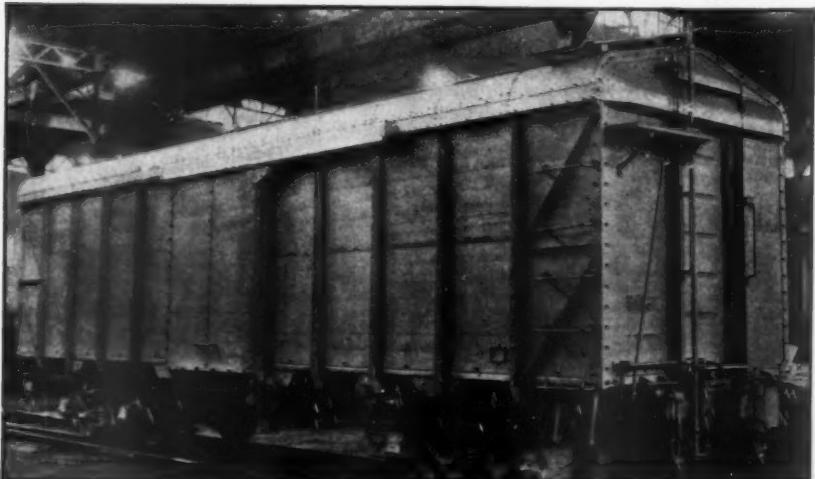
After steel strips have been coated dull gray in a chemical bath in which an electrical current "dissolves" suspended bars of pure tin, the radio process is ready to take over. Through the turns of copper coil, the dull, tin-coated strips are passed to be bombarded by



### WOOD CARS FOR NEIGHBORS

New box cars now being built in the shops of the Canadian Pacific Railway have the appearance of the conventional steel-sheathed models, but actually the sheathing is 5-ply British Columbia fir,  $\frac{1}{2}$ " thick. Substitution of wood for steel has reduced the net weight of each car by approximately 1,800 lbs., thus enabling additional

freight to be carried. A somewhat different application of wood sheathing (below) is being employed on 550 box cars being built for a South American government by Pullman-Standard Car Mfg. Co. and American Car & Foundry Co. Prefabricated Douglas fir for single-sheathing the cars has been pressure-treated with Wolman salts preservative for protection against termites and decay.



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## A SABOTEUR STRIKES...

### Where To Search In YOUR Plant

1. At cables with combustible insulation.
2. At worn or frayed electrical cords.
3. At switches with loose connections.
4. Where welding is unsupervised.
5. Where open flames are used.
6. Where static is generated near flammable vapors.
7. At bridged fuses.
8. Where sparks are not confined.
9. At improperly oiled bearings.
10. Where workmen are careless with matches, cigarettes.
11. Where spontaneous ignition is possible.
12. At dirty flues and ducts.
13. At dirty, oily or overloaded motors.
14. Where light bulbs contact combustibles.
15. Where flammables are used for washing machine parts.

Everywhere throughout your plant, saboteurs in the form of special fire hazards may be waiting for an unguarded moment to strike. Even a neglected handful of oily rags, ignited by spontaneous combustion, is enough to start a fire that will destroy buildings, machinery and materials irreplaceable for war production.

A big step toward prevention is the searching-out and elimination of all known potential hazards. But the only positive protection is to provide a means for stopping any and every

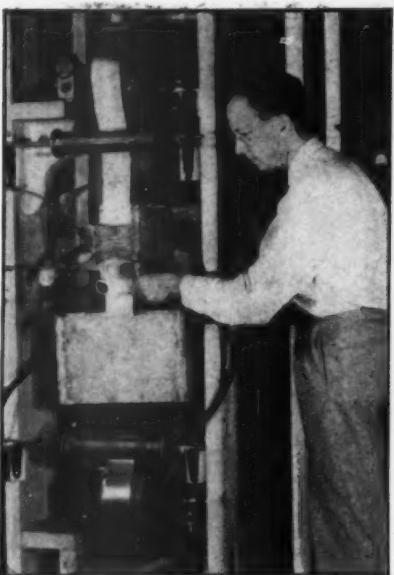
fire automatically, *at its source!*

Dependable, automatic, a Grinnell Sprinkler System detects and stops fire of any origin before major damage can occur. It is engineered and prefabricated to meet your special requirements . . . then installed with minimum disruption.

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**AUTOMATIC SPRINKLERS**

*For Production Protection*



R. M. Baker, Westinghouse engineer, checks the temperature of the tinplate strip passing through the model mill that he used in developing the radio-wave plating process.

the radio waves which melt and smooth the tin. In a fraction of a second, the tinplate emerges from the heating coil, bright, shiny, and hot. It is passed through water to be cooled and then wound on a reel, ready for shipping.

• **Frequency Stepped Up**—In the heating apparatus are vacuum tube oscillators, essentially the same as the transmitter of a radio station. Alternating current is converted to direct current, then fed to the oscillator tubes where it is "chopped up" into high-frequency alternating current, so-called because it changes direction 400,000 times per sec.

Advantages claimed by Westinghouse engineers for the radio wave method are that it eliminates cumbersome furnaces; no supporting rolls touch the metal while the strip is hot; the heat generated can be easily adjusted to compensate for loss of speed when another strip is fastened to the strip going through the heating coil; and the high-frequency apparatus can be put directly into the electrolytic tinning line and can operate as fast as the strip can be plated.

• **Can Meet Pace**—At the present time, electrolytic lines operate at a speed of 500 feet per min., but they are expected to be speeded up to 1,000. It is claimed the Westinghouse method can match that speed, while gas furnaces operate at only 150 ft. per min., and the hot oil process is about 50.

Wartime prohibitions—such as the ban on use of tinplate for packing dog food, beer, peanuts, coffee, and some other products—will decrease next year's tinplate requirements. A recent gov-

ernment order lopping off another 25% in the production rate of tinplate during the fourth quarter of 1942 has resulted in several more tinplate plants being shut down, including tin mill operations at the Pittsburg (Cal.) plant of Columbia Steel Co. and at the Steubenville (Ohio) plant of Weirton Steel Co.

## Milestone in Dies

**Kirksite "A" blazes new trail in casting dies for the aircraft plants; process faster than tool steel.**

A Cleveland electrotyping concern, deciding its place in the war program was in the field of custommade forming and stamping dies, converted its plant, and started production a few days ago. The company was the Ace Electrotype Co., and when it set about casting dies from Kirksite "A," it created another milestone in the career of this relative newcomer in the field of die materials.

• **Wide Acceptance**—Kirksite "A," a zinc alloy, was developed by National Lead's Los Angeles division (Morris P. Kirk & Sons, Inc.) less than three years ago, and has found growing acceptance ever since. It is only now, however, that the sinking of dies has been established

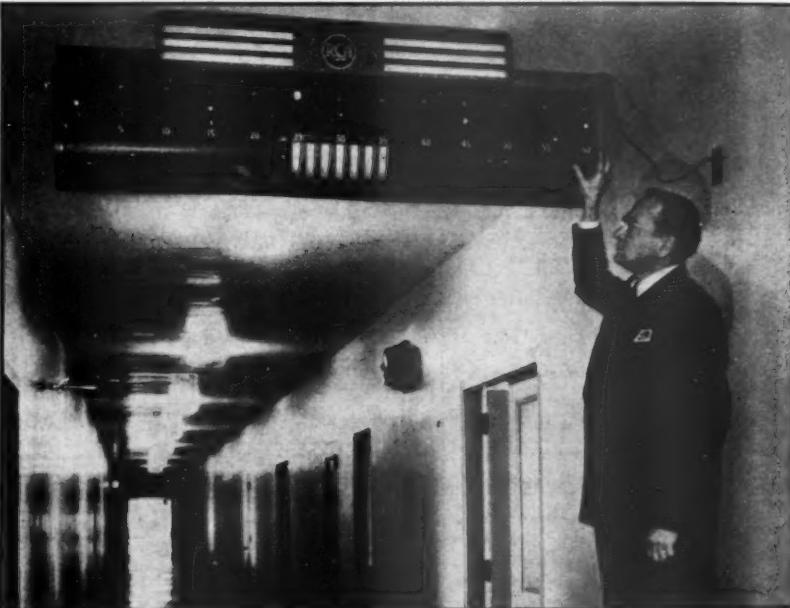
in the Cleveland area, the Apex Electrical Mfg. Co. having taken up Kirksite die-making at about the same time Ace Electro did.

In contrast with the past reluctance of the metal-forming industries to accept substitutes for tool steel in dies, Kirksite has won a wide following, and is edging out tool steel in many die applications. National Lead Co. claims that Kirksite castings are in use in all aircraft plants west of the Mississippi and in 90% of the others. Alloying plants are operating in Cleveland, Los Angeles, New York, Chicago, Dallas, St. Louis, and Toronto. In addition, American Stove, Perfection Stove, and Tappan Stove in Mansfield, Ohio, and Goodyear Aircraft in Akron operate Kirksite foundries for their own die requirements.

• **Speed and Economy**—A priority rating of AA usually is required with a Kirksite purchase order. Its main selling points are production speed and overall economy. A Kirksite die can be produced from a drawing in one eight-hour day; a steel die of comparable size might require three to six weeks, and cost about ten times as much.

Kirksite's self-lubricating properties permit less careful handling of sheet stock and blanks, but handling of patterns must be meticulous, for even a pencil mark on the sand or plaster mold shows up in the Kirksite casting.

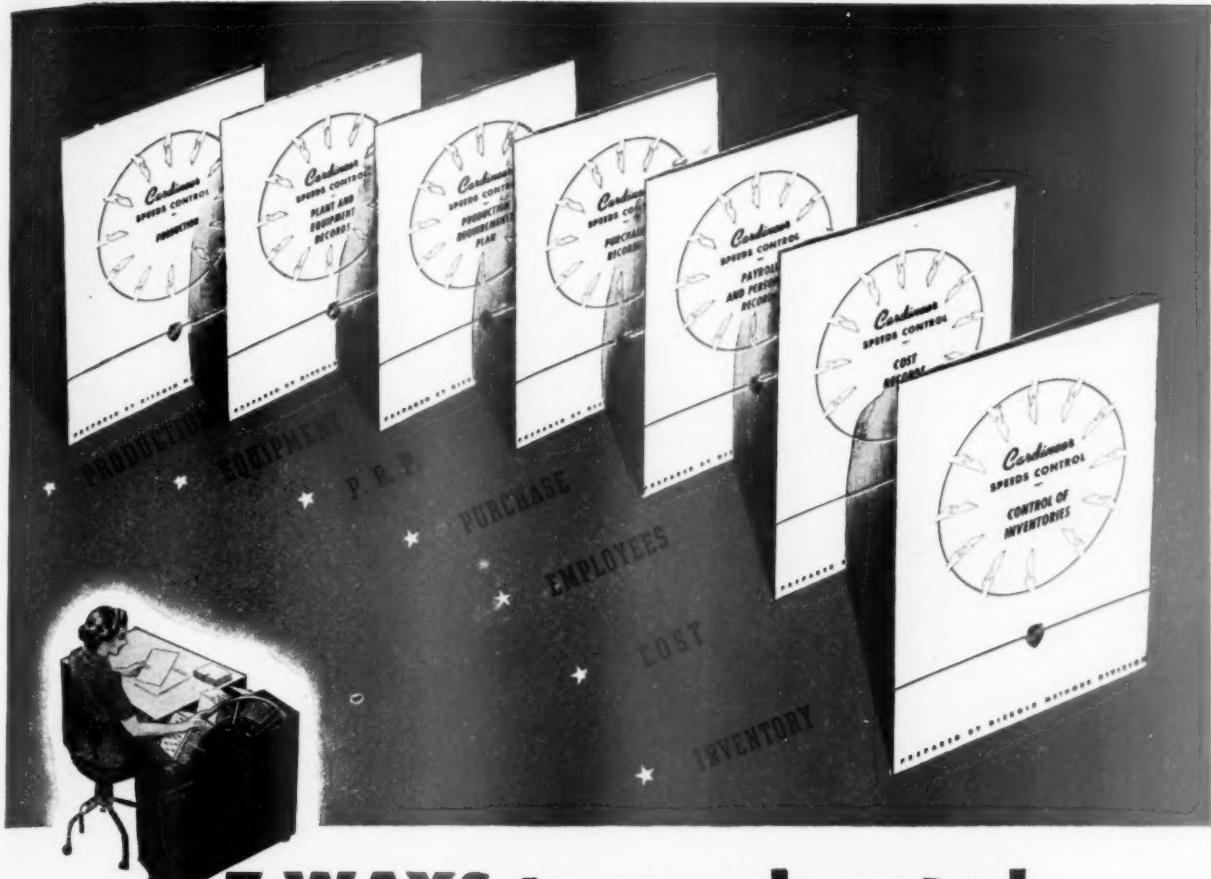
• **Allergic to Lead, Tin**—Handling of



CLOCK OF THE FUTURE

A clock with no moving parts, which means no motor, no wheels, main spring or hands, has been installed in the new RCA Laboratories in Princeton, N. J. The ultra-modern time-piece, which is equipped with more

than 170 electronic tubes, counts the 60-cycle pulsation of electric current, and indicates the count in terms of seconds, minutes, and hours by means of lights. Blinking lights tick off the seconds on the line shown from 1 to 60, while other lights denote the minutes and hours.



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**WAR-TIME**  
**NOTEBOOK**

the metal is equally exacting. Although its cost may be considered a capital expense, because it can be remelted and recast, National Lead points out in its handbook on foundry practice that Kirksite must not be contaminated with other metals, particularly, lead and tin.

Only 0.01% lead is enough for contamination, and as much as 0.05% causes a loss of one-third the tensile strength and 75% of the impact strength in one year of normal aging. Effect of tin is at least as serious. Once either of these elements gets into the alloy, nothing can be done to remove it.

• **Steel Kettles Useless**—As little as 0.25% of iron, which dissolves into

Kirksite if the kettle gets too hot, is enough to produce defects in castings. Welded steel kettles formerly used for melting straight zinc are attacked rapidly by molten Kirksite and cannot be used. The melting pot should be iron, protected with a sprayed or brushed-on coating inside, and the furnaces should be at least 50 feet apart.

Whereas steel dies are formed by time-consuming and expensive cutting operations, Kirksite dies may be cast in sand or plaster molds to exact specifications, allowing 0.14 in. to the foot for shrinkage in cooling.

• **Cools Smoothly**—Kirksite flows evenly into a dense casting, is handled at temperature around 800 deg. F., compared with about 3,000 for iron or steel, and cools without rough surfaces or blowholes. Blow-torch melting and additional molten metal easily correct shrinkage depressions, and if there are imperfections in the casting, they may be corrected by a puddling operation with an ordinary welding torch, using Kirksite rod or strips. Edges of Kirksite blanking dies may be sharpened by a similar operation, and minor engineering changes made in design while the die is mounted.

Either the die or the punch of a die set may be used as a form, if coated with sheet wax rolled to thickness of the metal to be stamped, into which or around which the opposite piece of the set can be poured. When a major change is made, a new die is relatively cheap, and there is no expensive labor cost to be written off.

## Cork from Fir

Washington and Oregon can produce 100,000 tons a year each from Douglas fir to meet lack of imports.

Experiments in production of high-grade cork from bark of Douglas fir trees of the Pacific Northwest have reached a point where researchers are willing to guarantee that Washington state alone has a potential annual output of 100,000 tons. Oregon forests should be able to add about an equal amount.

• **Can Meet Demand**—Dean Hugo Windenwerder of the College of Forestry, University of Washington, under whose direction experiments have been made, declares he can assure commercial users, as well as the Army, that production "can be gauged to meet whatever demand exists."

Cork from Douglas fir bark has been discussed for several years, and experiments have been conducted sporadically in various laboratories, but the low prices on cork from Mediterranean

## FACTORY FREIGHT TRAINS..

★ One of a series of advertisements showing how BATTERY INDUSTRIAL TRUCKS are speeding war production by handling materials efficiently.

While straight-line sequence of work is one of the ideals of production layout, it cannot always be followed in actual practice.

There may be some operations which, for purposes of process efficiency, must be performed in one place. When that is the case, the entire output of one or more production lines must be collected for delivery to these special operations and, quite frequently, relatively long distances must be covered.

For such handling jobs, many war industries are finding that the tractor-trailer system is an ideal method. It is, in effect, a system of factory freight trains. And, to avoid needless handling and save "demurrage" on the trailers, each trailer load can be unitized on a pallet which can be lifted onto the trailer by a fork truck in one operation, and removed at the destination in the same way.

Such handling efficiency pays dividends today in increased production for war; will pay dividends in lower costs for tomorrow's peacetime competition.

## THE INDUSTRIAL TRUCK STATISTICAL ASSOCIATION

208 SO. LA SALLE ST.  
CHICAGO, ILLINOIS



MEMBERS—TRUCK MANUFACTURERS: AUTOMATIC, BAKER, CRESCENT, EASTON, ELWELL-PARKER, MERCURY AND YALE;  
BATTERIES: ERISON, EXIDE AND PHILCO; BATTERY CHARGING EQUIPMENT: ELECTRIC PRODUCTS AND DEXTER.

countries have discouraged researchers from working out a complete process. With imports shut off by war, they got down to business about a year ago at the instigation of the Washington State Planning Council.

**• Four Grades Discovered**—According to Prof. Bror L. Grondal, who is conducting the experiments, deep cork formation occurs at a relatively early age in the life of the tree. It is straw yellow in color and is found in crescent-shaped particles. In order to be suitable for production of granulated cork, bark must contain a considerable proportion of cork. Prof. Grondal's research has discovered four grades of bark from which different yields of cork can be taken.

In manufacturing, the first step is to chop the bark into pieces approximately two inches long. Then the chopped bark is spread out on trays to dry. When partially dry, it is ground. Then it is screened on a special type of screening apparatus developed at the university.

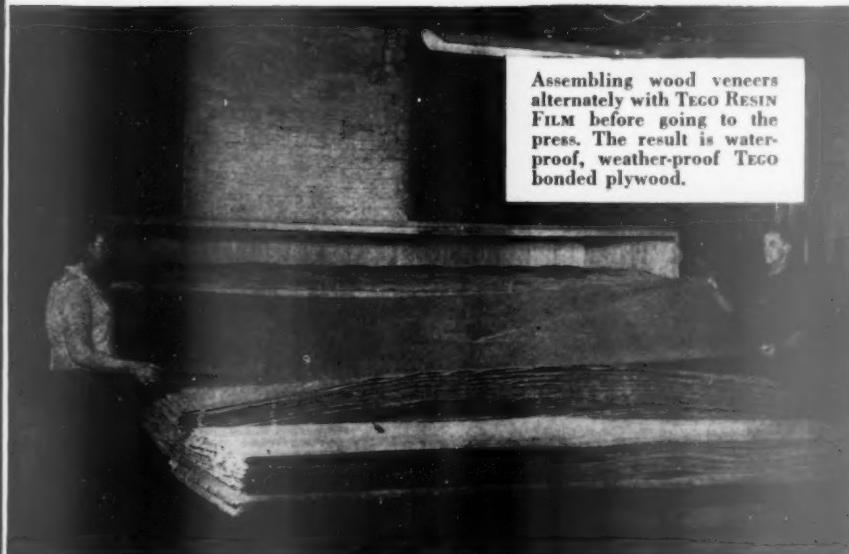
**• Flake to Granule**—Then it goes through additional grinding, drying, and screening processes, which produce a clean flake cork. Further grinding of the flake cork then results in the granulated product. Finally, the cork is expanded and given resiliency and elasticity through treating it with special solutions of water and ammonium hydroxide.



#### DIAMOND DUST

Recovery of diamond dust, which has been mixed with oil and tungsten carbide in polishing operations at the laboratory of General Electric's Works, has been simplified by method that calls for heat treatment (above), but requires only a fraction of the time formerly used and only a small amount of chemicals. G. E. obtains its diamond dust from worn-out diamond wire drawing dies, which are crushed and sifted.

# "PAPER" that gives Wooden Wings the STRENGTH of STEEL



Assembling wood veneers alternately with TEGO RESIN FILM before going to the press. The result is waterproof, weather-proof TEGO bonded plywood.

## ...that's TEGO RESIN FILM

THE highest quality aviation plywood is fused with an apparently fragile piece of paper . . . TEGO Resin Film. The result, known as TEGO bonded plywood, is the accepted standard for aeronautical plywood complying with the rigid requirements of U.S. Army and Navy Specifications.

Introduced in 1935, TEGO Resin Film laid the foundation for the development of the resin-bonded plywood airplane, glider, PT boat, prefabricated house and

many other invaluable plywood products.

A few of the major advantages TEGO Resin Film has given plywood are steel-like strength, complete resistance to water and weather, plus speed of output.

Today, TEGO is an important member of a complete line of pioneer resin adhesives developed by The Resinous Products & Chemical Company to meet the needs of every producer of military and naval plywood products. Send for complete information and technical service.

#### Other Synthetic Resin Applications Developed By The Resinous Products & Chemical Company

WOOD AND METAL COATINGS, resin emulsion paint bases, synthetic rubber plasticizers, gas-resistant coatings, ion exchange resins for purifying water—all these are synthetic resin applications developed in our Laboratories which are today constantly expanding through the use of resins we manufacture. An illustration of this is:

**AMBEROL**—Phenol formaldehyde resins, introduced in 1926, were the foundation for modern, quick-drying, oleo-resinous finishes.

By imparting to finishes excellent drying properties in combination with toughness, hardness, water-proofness, and freedom from after-yellowing, the AMBEROLS improved directly the performance of hundreds of peacetime products.

Today, the versatile AMBEROLS and our other coating resins are vitally important in the production of military paints, camouflage lacquers, white baking enamels for hospital equipment and many other essential wartime uses.

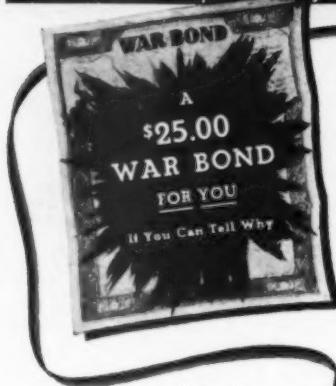
THE RESINOUS PRODUCTS  
& CHEMICAL COMPANY

WASHINGTON SQUARE, PHILADELPHIA, PA.

9/9  
33

# "dag" COLLOIDAL GRAPHITE

**IS IMPORTANT In the Manufacture  
Or Use of These Products**



**"dag"  
COLLOIDAL GRAPHITE  
AS A RUNNING-IN LUBRICANT**

Years of experience have definitely established the fact that when "dag" colloidal graphite is present in the oil used for running-in engine and compressor cylinders, piston rings, bearings, reduction gearing and valves, the following results are obtained:

1. Smoother bearing and rubbing surfaces.
2. Less power lost from friction.
3. Lower operating temperatures.
4. Less oil needed for complete lubrication.
5. Shorter running-in period required.
6. Less danger from a temporary failure of the oil supply.
7. Less corrosion, especially in cylinders.
8. Reduction in maintenance and replacements.
9. Longer useful operating life of the mechanism.
10. Close tolerances maintained.



ACHESON COLLOIDS CORPORATION

PORT HURON  
MICHIGAN

## NEW PRODUCTS

### Polarizing Film

When the normal supply of quinine from the Far East was cut off by the war, there was a question whether enough of the material could be spared from medical requirements to permit manufacture of the microscopic quinine-iodine crystals which polarize light in scientific instruments, television, photographic equipment, sun glasses, etc. With that in mind, Polarized Products Corp., 113-15 University Place, New York, went to work on the development of its new Plastic Polarizing Film, which requires no scarce imported materials.

The new polarizer also comes in the form of laminated glass. Both forms are being used in military material, but limited quantities are available for civilian experiment and use.

### Fluorescent Magnifier

A miniature fluorescent tube about 5 in. long provides cool, shadowless light for the 5-in. lens in the new Stanley Flud-Light Magnifier.

Stanley Electric Tool Div., The Stanley Works, New Britain, Conn., makes



### HERE ARE THE RULES

Acheson Colloids Corporation will give a \$25.00 War Bond to each of the 5 people who submit complete and accurate answers together with the 5 best letters on the question, "Why is 'dag' colloidal graphite important in the manufacture and use of the twelve products pictured above?" (1) State business connections (no one in the graphite field or their families will be eligible). (2) All entries must be legible. (3) All entries must state the publication in which the advertisement was seen. (4) Entries must be postmarked not later than December 1, 1942. (5) In case of tie, duplicate awards will be made. (6) Entries become the property of the Acheson Colloids Corp. (7) The verdict of the judges will be final.

Here are several reasons for this. "dag" colloidal graphite is a good, solid lubricant. While the graphite particles coat the metal of the friction surfaces, the coating is so thin that its thickness cannot be measured. The coefficient of friction of metal on colloidal graphite is not much greater than fluid friction. "dag" colloidal graphite, by reducing the surface tension between metal and mineral oil, will cause the oil to spread farther over the metal surface and will re-establish more quickly an oil film that has been ruptured.

*White*

For NEW BULLETIN 421M  
on the use of "dag"  
Colloidal Graphite for  
Assembly and Running-in  
Engines and Machines.

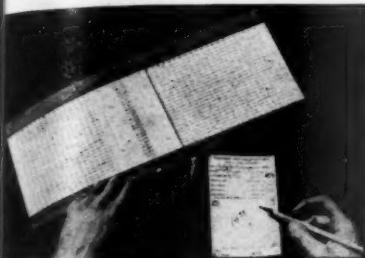
it in two models—one with adjustable base as illustrated, the other with a comfortable hand grip—for close inspection, fine machine and assembly work, map making and reading, counterfeit detection, engraving, fingerprint classification, what-have-you.

### Air Motors

Although the compact new Cast Rotatory Air Motors, now being brought out by Gast Mfg. Corp., Benton Harbor, Mich., are designed to deliver from 1/20 to 1 hp. in locations where explosion-proof equipment is essential, they will be found equally useful in plants, which by reason of the copper shortage are unable to extend wire facilities for electric motors. They run on ball bearings, have self-adjusting shaft seals instead of packing, are said to start positively.

## Pay Calculator

The new Payroll and Job Calculator, developed by Berger & Bricker Co., 433 S. Spring St., Los Angeles, is a specialized type of slide rule made of lacquered wood, large enough to provide legible figures, small enough to slip into a desk



drawer. Rates of pay within its compass range from 50¢ to \$1.75 per hour in increments of 1¢. Time periods range from 0 to 104 hours. You simply set the slide and copy the result.

## Cam-Action Saw Frame

Quicker blade changes, straighter cuts, reduced blade breakage are promised by the Star Hack Saw Frame with cam-action lever-lock, new product of Clemson Bros., Inc., Middletown, N. Y. It may be adjusted for 8-, 10-, or 12-in. blades by withdrawing a pin, sliding the frame forearm to desired length, and snapping the pin back into place.

The blade may be adjusted to any one of four positions by slipping it over



appropriate fixed pins. A quick squeeze on the lever-lock tightens the blade to high tension.

## Spot Weld Tester

Baldwin Southwark Div., of the Baldwin Locomotive Works, Philadelphia, is bringing out a new Spot Weld Testing Machine for use in production line testing of sheet metal fabrication. It is a self-contained, motor-driven, hydraulic device about as tall as a man and not quite as big around.

Lever-operated grips with renewable hard file faces clutch welded specimens from the thinnest gage to  $\frac{1}{4}$  in., while hydraulic cylinders pull them apart and an 8-in. precision dial at eye level registers the load.

Business Week • November 7, 1942

From time to time new faces appear in the chorus, but the routine loses none of its precision. Expedient selection of materials speeds Whiting Crane production without affecting the quality of their performance.

*Where Need is Urgent...* **WHITING VICTORY CRANES**

Battles wax and wane—but war on the production front must go forward with unabated energy. Manpower is too valuable to be wasted on laborious materials-handling or other obsolete methods. Today's urgent need for cranes is being met with Whiting Victory Cranes—streamlined, modernized equipment in keeping with wartime needs. Although there are no frills or extras, their performance is fully guaranteed. You are assured the same durable construction and smooth operation as always. Whiting Corporation, 15661 Lathrop Ave., Harvey, Illinois.



BUILDERS OF QUALITY CRANES FOR NEARLY 60 YEARS

**WHITING**  
CORPORATION

Quiet-Running OVERHEAD TRAVELING CRANES

## Three Years

After Dunkirk Canada was thrown on her own resources to arm her fighting men. Those resources were pitifully small. The gun and ordnance industries were non-existent. There were virtually no skilled armament workers. One small plane alone made steel suitable for guns.

An elevator manufacturer began making the famous 400 mm. Bofors anti-aircraft guns, an electrical equipment manufacturer the 3.7. Bomb throwers, anti-tank guns, mortar bombs, machine guns and other equipment are now being made by factories with no previous experience.

Before the war Canada imported all her machine tools. Now she produces many of them—actually exports some. Canadian industry has worked miracles in the three years since Dunkirk.

## The Royal Bank of Canada

Head Office—Montreal

This advertisement is published in the belief that our American Neighbours will be interested in the facts presented. More detailed information is available on request to The Director of Public Information, Ottawa, Canada.

## HERE'S POWER WHEN YOU WANT IT *Quickly!*

**Every minute saved  
is important today**

When power failure in vital industries or military establishments compels "Time-out" that's when Bardco Emergency Generating Plants "step-up" power automatically.

In 3½ seconds, OR LESS

Bardco standby generating plants PICK UP THE LOAD, without hesitation or voltage fluctuation.

In directing every effort toward VICTORY—the entire manufacturing facilities of our two large plants are devoted

24 hours per day to the production of Bardco Generating Plants for use by our armed forces.

One to 200 KW units for single or multiple installations; Diesel, gasoline or natural gas engine driven, stationary, portable, semi and full automatic types



Reg. U. S. Pat. Off.



### BARDCO

MANUFACTURING & SALES CO.  
Los Angeles, Cal. • Dayton, O. • Washington, D. C. • Toronto, Can.

# WAR BUSINESS CHECKLIST

## The Week's Orders

A digest of new federal rules and regulations affecting priorities and allocations, price control, and transportation.

### Farm Machinery

All stocks of new farm machinery and equipment, except repair parts in the hands of manufacturers and distributors, and some 144 items of heavy machinery in the hands of dealers, have been frozen as of Nov. 1.

The freeze will remain in effect until state and county quotas—not unlike those now in effect for automobiles and tires—have been established by the Department of Agriculture and its associated state war boards and county rationing committees as a basis for a permanent rationing order. (USDA Temporary Rationing Order B.)

### Building

War housing construction standards of design and material consumption, to which all builders will be required to conform, have been set up by WPP after consultation with the National Housing Agency. All existing restrictions and limitation orders on construction materials remain operative, and the following additional restrictions, among others, are imposed:

Single family units may be built only where there is a definite and immediate need for that type of housing.

All new structures, as far as possible, shall be built adjacent to existing utilities.

Exterior walls shall be of masonry or lumber substitute wherever possible; softwood subflooring and finished flooring is prohibited; other use of softwood lumber is allowed only in reduced quantities; lumber specifications in the plans may not be restrictive but must allow use of any grade or species that can serve the purpose.

Maximum heating units and plumbing installations are specified for various types of dwellings to insure that the capacity of the unit or installation will not exceed the actual requirements.

An amendment to Order M-9-C-4 reduces installation of copper in new buildings to practically zero by forbidding new purchases of the metal for use in repairs. Copper building products up to 25 pounds now in the possession of the user may still be used.

No new preference orders covering privately financed war housing projects

(P-55) or remodeling of defense-and-housing (P-110) will be issued by WPP field offices pending further allocation of critical materials for these purposes.

### Tires and Tubes

New, higher, ceiling prices, which Defense Supplies Corp. may pay for used tires under the idle tire return plan, have been established by OPA. Ceilings are unchanged for the two highest categories—casings that still have more than 3/32 of an inch of tread-design depth remaining; a few minor increases have been put into effect in the third category; and considerable increases are allowed for tires in the fourth group—those worn down to the recapping point. For instance the ceiling on a sound recappable, 6.00x16 carcass has been raised from \$1.50 to \$3.50; on 6.25x16 and 6.50x16 carcasses from \$1.50 to \$4.00. Corresponding increases are allowed for recapped tires. The new prices are retroactive to October 15, when the purchase plan became effective.

The increased ceilings are also applicable to sales by recappers to the public in cases where the consumer does not supply his own carcass. Ceilings on the charge for recapping when the consumer does supply his own carcass have also been raised to permit adequate compensation for higher quality workmanship, which is necessary with the use of the lower quality camelback to which recappers are now restricted.

Amendment 4 to Regulation 165 requires that services such as mounting, demounting, pickup, and delivery performed in connection with the sale of tires and tubes—new, used, recapped—must be computed under the separate price regulations covering those commodities rather than that applying to services generally.

### Enamelware

The enamelware industry has been having its troubles for some time (BW-Jul. 11 '42, p64), and now with issuance of Order L-30-B, it has some new ones. This order not only calls for vertical limitation by cutting the amount of iron and steel that can be used by 25% (based on consumption in the year ended June 30, 1941) but also calls for major simplification and standardization by reducing the number of enamelware items to be made henceforth from about 450 to 25 items.

Net effect of this sharp reduction in the number of items to be made is that many more of them will be turned out—despite the 25% cut in steel input—at the expense of the lines that are discontinued. Items that are continued in

# FAST AND FLEXIBLE DELIVERY!

*That's why*  
ARCADY FEEDS ARE SHIPPED BY TRUCK-TRAILERS!

ALL EIGHTY-FIVE products of Arcady Farms Milling Company, Chicago, are important factors in sustaining America at war.

And key factors in the feed business are fast delivery and flexibility to meet the varying needs of dealers and farmers. A wide variety of feeds must be available, without overstocking. Supplies must be fresh. Orders must have immediate attention. Dealers must be protected against prevalent price changes.

The 12-ton Fruehauf Trailers, pulled by economical 2½-ton trucks, which Arcady Farms began using six years ago, assure that kind of service for the thousands of Arcady Feed users in the mid-West. For instance, all deliveries are over-night from Chicago . . . they took three to five days by rail.

#### CUSTOMERS PROFIT, TOO

Dealers and customers profit, too, for they get carload shipping rates, however small the shipment.

As for Arcady Farms, Truck-Trailer service has brought a big increase in sales volume and new dealer accounts . . . not a few of which grew out of letters like this: "I see your Trailer going past my store. Please send your catalog."

Arcady Farms' Fruehauf Trailers get hard usage . . . about 75,000 miles a year. Repair costs? Only lubrication, painting and nominal maintenance.

Thousands of companies, in scores of industries essential to the war, many of them with unusual hauling problems, have found Truck-Trailers to be the complete solution.

*World's Largest Builders of Truck-Trailers*

**FRUEHAUF TRAILER COMPANY • DETROIT**  
*Sales and Service in Principal Cities*

#### TRUCK-TRAILERS CONSERVE RUBBER, STEEL, GASOLINE, MOTOR POWER . . . and thus Help America

**SMALLER TRUCKS USED**—Since a truck, pulling a trailer, can haul as much or more than a far bigger truck can carry, the large units are released for military work for which they are essential.

**RUBBER AND STEEL CONSERVED**—A truck-and-trailer combination uses about 16% less weight of tires and 25% less steel than do the two trucks required to carry the same payload.

**FEWER TRUCKS USED**—Many companies, previously operating fleets of trucks, replaced some of them with trailers . . . and now move the same tonnage with fewer power units. "Shutting" saves still more trucks.

**GASOLINE CONSERVED**—A truck, with a trailer, uses far less fuel than the one large truck or several small trucks it replaces.

*Convert*

... your present trucks into tractors, to pull trailers . . . and they will do twice . . . even three times . . . as much work as they've been doing. Conversion is simple and inexpensive. Ask your Fruehauf Branch about it.

REG. U. S. PAT. OFF.

# FRUEHAUF TRAILERS

"Engineered Transportation"



TRUCK-TRAILER TRANSPORT IS DOING AN ESSENTIAL JOB FOR ALL AMERICA



WHEN grappling with Axis fighters at high altitudes, American planes need that extra toe-hold on the stratosphere which Weatherhead flexible hose makes possible. Specially designed, it feeds fuel, air and water to throb-

bing motors without interruption at all temperatures, absorbing the shock and strain of a fighting plane tumbling about in battle. This is but one of many war products Weatherhead plants are making at the rate of millions every day!



*Go Ahead of Schedule with*  
**WEATHERHEAD**

The Weatherhead Co., Cleveland, Ohio • Branch Offices: Detroit, Los Angeles, New York and St. Louis

WORLD'S LARGEST MANUFACTURER OF FITTINGS AND FLEXIBLE HOSE

clude those that are suitable for use by the armed services as well as by civilians.

Permissible manufacturers and sizes follow: Coffee boilers (9½ qt. to 12 qt.); two sizes of double boilers (14-2½ qt. and 6½-8 qt.); dish pans (9-15 qt.); three sizes of steamtable insets (to fit openings 6½, 8½, and 10½ in. in diameter); preserving kettles (14-20 qt.); ladle (manufacturer may choose size); water pails (10-12½ qt.); two sizes of steamtable pans (manufacturer's choice, to fit rectangular openings only); percolator (6 to 9 cup capacity); two sizes of Remarie pots (2-2½ qt. and 4-4½ qt.); two sizes of sauce pots (3½-8½ qt.); three sizes of stock pots (15-36 qt.); sauté pans (14-2½ qt.); single wall roaster (15-19 in. in length).

### Petroleum Products

Minimum specifications on gasoline, kerosene, and fuel oil to be pooled and shipped into the East Coast area (District 1) in accordance with OPC Directive 59 have been set by the Office of the Petroleum Coordinator after consultation with the oil industry.

Minimum gasoline specifications call for 80-octane for premium grade and 72-octane for regular or house brand (80-octane is the minimum standard acceptable for delivery to the Army).

Minimum kerosene standard is the U. S. Treasury Procurement Division Specification VV-K-211a. The fuel oil minimum is Commercial Standard C 12-40.

### Wool

Taking advantage of a temporary relaxation of military demand for wool and worsted yarn, WPB has ordered an additional 6,000,000 lb. of wool made available for the manufacture of sweaters, shawls, and knitted underwear for civilian consumption. The additional wool may not exceed 10% of the processor's basic quarterly allowance, and the yarn must be put into process prior to Jan. 15, 1943, in the manufacture of sweaters, shawls, or underwear containing not more than 65% wool. (Amendment 3 to Order M-73.)

### Men's Clothing

Nonwool garments have been placed under regulation for the first time, although the restrictions are not quite as drastic as those placed on wool clothing last March. Chief leniencies in the nonwool regulations are:

(1) Cuffs and pleats on trousers are permitted. (2) Patch pockets are allowed on unlined jackets and coats. (3) Coats will be one-half inch longer than the same size in wool. (4) There is no limitation on the inseam of trousers.

Certain amendments to the original

order have also been made. Chief among these are: (1) Simulated pleats and cuffs as well as actual ones are prohibited for woolen trousers. (2) Worn cuffs on wool trousers purchased before the original order went into effect may be repaired or restored. (3) Retailers must remove all extra wool trouser leg over and above a three-inch turn-up, thus eliminating the loophole through which buyers have been able to make their own cuffs. (4) All high-rise trousers—wool and nonwool—are prohibited. (Order L-224 and revocation of Order M-73-A.)

### Manganese Ore

OPA has established specific dollars-and-cents ceilings for all domestic sales of manganese ores except battery and chemical ores. A basic schedule has been set up for ore with mineral content of 48% manganese, 6% iron, 11% silica plus alumina, and not more than 0.18% phosphorus on a dry basis. The usual premiums and penalties are provided for mineral content differing from the base amounts.

For imported battery and chemical manganese ore, the ceiling is the highest price which the seller charged for the same grade of ore delivered to the same class of purchaser during March, 1942. Price adjustment is allowed to compensate for increased importing expenses since March 31.

Specifically exempted from ceilings are all deliveries to the United States and its agencies including the Metals Reserve Co., all sales of domestic battery and chemical ores, and all sales of foreign ores bought f.o.b. a foreign mine or port. In the last instance however, OPA will not grant any relief on end-product prices due to use of higher priced imported ores. (Regulation 248.)

### Fish

In a move at least in part induced by the meat shortage, WPB has released for civilian consumption 20% of the total pack of salmon, sardines, and mackerel between Mar. 1, 1942 and Feb. 28, 1943. Canners are permitted to release this 20% only after they have delivered 60% of the pack to the government. The remaining 20% is to be retained by the canner until it is determined whether any part of it will be required by the government.

### Wood Packing Boxes

In view of the increasingly serious steel and lumber shortages, which have resulted in curtailed supplies of wire, nails, and lumber for wooden boxes, producers and consumers have been asked by the Containers Branch of WPB to investigate thoroughly the possibilities of using substitutes. No official re-

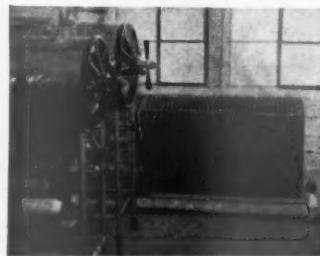
## ANNOUNCING a new non-metallic cabinet convector by TRANE



**Saves 80% of critical war metals yet is smartly designed, ruggedly constructed**



Skilled cabinet makers fabricate the casting of the new Trane Non-Metallic Cabinet Convector. Note the round grille design that permits positive air circulation without sacrificing cabinet strength.



Ideal for Army Hospitals, the Trane Non-Metallic Cabinet Convector will save thousands of tons of precious metals in jobs similar to this one.

Now a new convector that saves 80% of the precious metal used in the conventional radiator. Trane, at War Production Board suggestion, has developed a convector cabinet that utilizes non-critical substitutes. Yet many of the features that have made Trane Convectors the leaders in the field have been retained. There is the same even heat, fuel saving, attractive appearance, and cleanliness. The same mechanical bonded fin and tube coil construction. The same Trane Sloping Top feature.

The cabinet is fabricated of a durable non-metallic material, carefully reinforced by hardwood supporting members. Only metal used is a minimum of screws and brads. The easy-to-paint cabinets may be finished as desired when installed.

The steel heating element is carefully supported by means of hardwood corner posts eliminating any strain on the cabinet.

Two cabinet arrangements are available—one for wall suspension and the other of free standing floor type.

Available for war factories, army camps, hospitals, and similar military establishments, this new unit has already saved as much as 300 tons of precious metal on a single job. For further information call the nearest Trane representative or write The Trane Company, La Crosse, Wisconsin.

# THE TRANE COMPANY

LA CROSSE, <sup>AIR</sup> WISCONSIN

Also TRANE COMPANY OF CANADA LTD., TORONTO, ONTARIO  
HEATING • COOLING • AIR CONDITIONING EQUIPMENT FROM 85 OFFICES



**CONTROL**

**THE PULSE**

**OF PRODUCTION WITH AMPLICALL**

Wartime need for top production means *ceaseless supervision* by all responsible executives; like the skilled surgeons who seek out bodily faults, business heads must be more than ever before alert to the *pulse of production*, that weak spots may be remedied.

AMPLICALL Intercommunication and Paging are "stethoscopes" for coordinating all varying production factors through instant communication... report-

ing all vital business action to points of control... *at tremendous saving of time!*

A *time-saving, step-saving and cost-saving economy* that multiplies effort and defeats waste, AMPLICALL systems are engineered to meet your individual needs and are promptly available to concerns engaged in war production.

Capacities from 2 to more than 100 stations. Full information provided upon request.

**"Electroneering"\*\* is our business**



**RADIO-SOUND-COMMUNICATIONS.**

\* Our war-word for the many forms of engineering and manufacturing of electronic equipment that are proving such factors for our armed forces in all zones of combat.

**THE RAULAND CORPORATION**

(RAULAND-WEBSTER SOUND DIVISION)

**4245 N. Knox Ave., Chicago, Illinois**

strictions on the use of wooden boxes have been promulgated as yet, but some action is likely in the near future.

### Tire Chains

Production of tire chains, chain parts, and emergency chain units is cut sharply by WPB. Manufacturers may turn out for commercial vehicles 24% of all passenger car and commercial vehicle chains and parts manufactured from Apr. 1, 1941 to Mar. 31, 1942. Production for passenger cars is cut to 16% of all the passenger car and commercial vehicle chains and parts made in the same period, but only one-fourth of the total permitted for passenger cars may be made up into complete tire chain assemblies, the remaining 75% being reserved to provide repairs and replacement parts.

### Rubber Footwear

OPA has acted to clear up a general misconception through the announcement that, although a pair of unserviceable rubber boots or shoes must be turned in when buying a new pair, dealers are not required to make any trade-in allowances for them. (Amendment 2 to Regulation 229.)

### Babies

To relieve the mind of the expecting public, WPB has announced that current production of baby diapers is more than sufficient to take care of the increasing national birth rate.

Manufacturers report an as yet unannounced WPB order forbidding further output of twin-size baby carriages.

### Health Supplies

To centralize and simplify controls over the manufacture and distribution of medical supplies, WPB has issued Order L-214. This is described as "a basic enabling order authorizing the issuance from time to time of schedules establishing such simplified practices."

Schedule No. 1 to L-214 specifies a simplified list of hospital equipment and doubles the allotment of raw materials for the products enumerated in the schedule.

### Oil Burners

Interpretation of Maximum Price Regulation No. 165 (as amended) sets forth three conditions, all of which must have been met, if an oil burner service company is to raise its rates over those charged last winter. The conditions are:

(1) The increase must have been effective before Apr. 1, 1942, and work must have been done at the higher rate before that date.

(2) The increase must have been a general one, applying at once to customers without contracts and to other customers as rapidly as their contracts expired.

(3) After the increase became effective, all work must have been billed at the higher rate, except only such work as was done under earlier contracts requiring lower rates.

#### Foods

To cover the special pricing problem involved in handling holiday foods in the next couple of months, OPA has issued new pricing formulas, which require both wholesalers and retailers to use the same percentage markup over cost this year that they used on the same articles last year. The products covered are mince meat, plum pudding, date pudding, Christmas cookies, fruit cake, holiday candy, chocolate-covered cherries, sweet apple cider, glacéed or candied fruits and peels, stuffed dried fruits, dried figs, pure sorghum syrup, pitted and macerated dates and date products.

#### Photoflash Bulbs

Production of photoflash and photo-flood bulbs has been cut 65% below average 1941 output. Sales to consumers with priorities ratings below AA-5 is prohibited except for newspapers, periodicals, and newsmphoto syndicates. (Order L-28 as amended.)

#### Truck Delivery

The order that prohibits "more than one delivery from any one point of origin to any one point of destination during any calendar day" has been interpreted to forbid a customer from sending his own truck for a pickup if he has already received a delivery that day in the supplier's own truck. (Interpretation 17-14., Order ODT 17.)

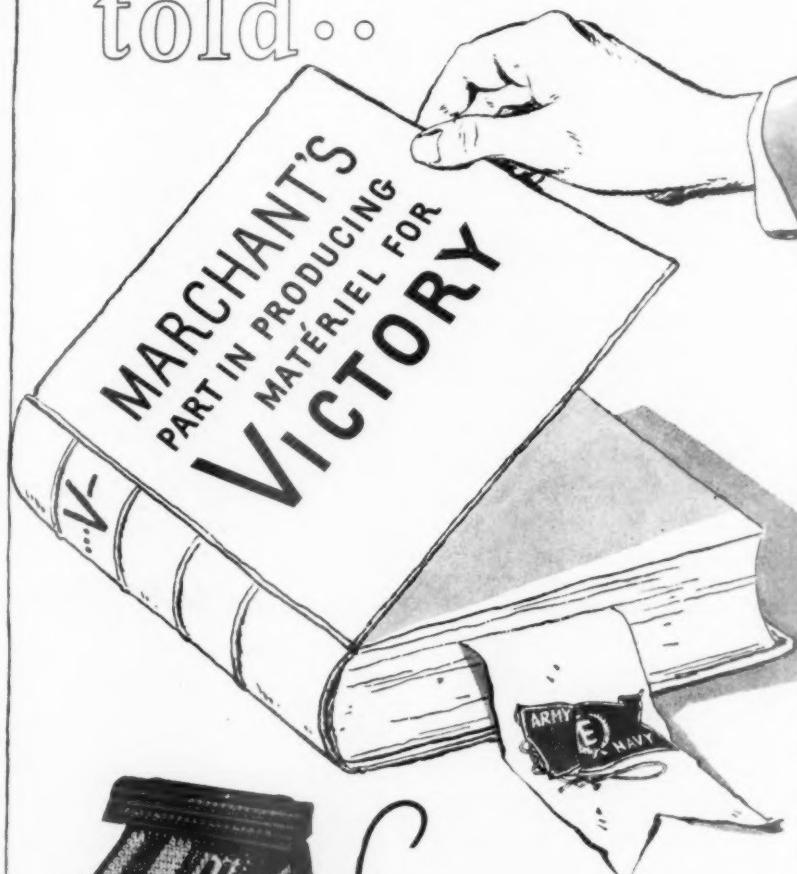
#### Rhodium and Iridium

Orders M-95 and M-49, which prohibit the use of rhodium and iridium in the manufacture of jewelry and which were due to expire shortly, have been extended indefinitely by WPB.

#### Packers

In order that there will be no spoilage of 1943 commodities due to breakdown at the canneries, WPB is raising the priorities available to packers of certain products. These ratings are extended to fruit and vegetable canners by amendment of P-115, covering their needs for material and machinery for replacement, maintenance, and repair. At the same time, fish canners are brought under amended P-115 instead of P-100, which

Someday the  
Story can be  
told..



SERVING  
IN SILENCE

**MARCHANT**  
*silent speed* CALCULATORS

MARCHANT CALCULATING MACHINE COMPANY • Home Office: Oakland, California, U.S.A.  
Sales Agencies and Manufacturer's Service Stations in All Principal Cities Give Service Everywhere

up until the time of this change extended the canners only an A-10 rating.

The new priorities range from AA-2 to AA-5, according to the products needed and the difficulty of obtaining them. The new ratings will not, however, apply to plant expansion, as the provision of P-115 that has allowed additions is now canceled.

### Stoves

Effective Dec. 25, thermostats may not be attached to cooking stoves, on the theory that they are nonessential and their use would constitute an unnecessary use of critical materials. (Amendment 3 to Order L-23-c.)

### Ration Cards

Persons entering the armed services or who leave the United States for more than 30 days must turn in war ration books to local boards to prevent their misuse.

### Sugar

Retailers and wholesalers may replace repackaging losses of sugar up to a maximum of 1% of the amount of sugar repackaged. Such small losses are inevitable in transferring sugar from large containers into small ones. (Amendment 21 to Order 3.)

### Other Price Actions

Specific dollars-and-cents prices have been established for domestic canned crabmeat (Regulation 247). . . . Substantial increases have been made in prices which may be charged to reclaimers and other processors for several classifications of scrap rubber (Amendment to Revised Price Schedule 87). . . . Repair and maintenance parts for railroad cars are subject to Regulation 136. . . . A price of 45¢ a troy ounce is set for Treasury sales of "silver ordinary" (Order 2, Section 3 [c], GMPR). . . . Laundries supplying industrial wiping towel device may charge customers for towels that are lost without violating the ceiling on services (Regulation 165). . . . Dried apple pomace has been removed from price control (Amendment 34, Supplementary Regulation 1, GMPR).

### Other Priority Actions

Paraphenyl-phenol resins have been placed under complete allocation and use control (M-254). . . . Deliveries of sperm oil to the armed forces are now under allocation control (Amendment to M-40). . . . New specifications for road-marking points have been issued by the National Bureau of Standards following the recent amendment to M-56.

# LABOR

## Flexible Freeze

### Future of Little Steel formula in doubt with Byrnes's approval of \$1-a-day increase for nonferrous metal miners.

The Little Steel formula of the National War Labor Board dropped into second place last week as a factor in the government's war-time wage policy. In its stead emerged the controls of the Office of Economic Stabilization, which, though essentially a pay freeze, proved in their first dress parade to be more flexible when occasion demands.

• **Nonferrous Award**—The vehicle for this demonstration was OES Director

James F. Byrnes's approval of the \$1-a-day wage increase awarded by NWLB to employees of 29 nonferrous-metal mining, smelting, and refining companies in western copper states. This award overstepped the boundaries of the Little Steel formula (BW-Jul. 25 '42, p80), which sanctioned aggregate wage increases of 15% over January, 1941 rates, to compensate for a 15% rise in the cost of living between January, 1941 and May, 1942.

Grave labor shortages in the metal mines were such that only a wage increase of \$1 a day could be counted on to rectify them and head off a disastrous scarcity of critical war metals. Thus, instead of applying an inflexible formula which would not solve the problem, Byrnes adopted the practical course.

• **Discretion, But**—In doing so, he noted



### IN COMMON-APPETITES

Anglo-American trade union relations, under strain because of the American Federation of Labor's rebuff to a common front with Soviet unions and the Congress of Industrial Organizations' exclusion from a conference proposed by the British Trades Union Congress, showed no improvement after a

luncheon at the British Embassy. Lord Halifax (seated, center) was host to AFL's William Green and C.I.O.'s Philip Murray (flanking the Ambassador); and (standing, left to right) Jack Tanner of the British Amalgamated Engineering Union; David B. Robertson, Locomotive Firemen and Engineers; Britain's Bryn Roberts, Public Employees Union.



## Forget-me-not insurance

RIGHT NOW, many manufacturers are concentrating on war work. That makes this forget-me-not hat\* mighty significant.

One bright victorious day, these war-busy manufacturers will be concentrating again on products that America knew and bought. In the meantime, many of them are making sure that their trade-marks and their products will not be forgotten.

In Philadelphia, The Evening Bulletin is *tops* in forget-me-not insurance. It has been the leading newspaper in this market for 37 continuous years. Today, with over 600,000 circulation, The Bulletin reaches four out of every five Philadelphia customers. More and more manufacturers are learning that a thorough advertising job in The Bulletin alone is the first requisite to a thorough job in the important Philadelphia market. More advertisers use this one newspaper exclusively for forget-me-not insurance than any other Philadelphia newspaper.



\*We borrowed the forget-me-not hat, and this story, from Frances Blackwood, feature writer on The Bulletin:

Her assignment was to go to England—not for a report on food shortages and civilian morale—but for six weeks' experience of day-by-day living in English homes at war.

Everything went wrong in her preparations for the Clipper trip to England—until she acquired this hat.

She insists it is a lucky hat, because everything smoothed out immediately. Her trip was a success. Her series, "Mrs. England Goes on Living," became one of those human, down-to-earth accounts that Philadelphia people have come to expect of their leading newspaper.

*In Philadelphia—  
nearly everybody  
reads The Bulletin*

that NWLB "must have a reasonable scope and discretion to balance competing claims so as to rectify serious inequalities and avoid loss in production." But he made it abundantly clear that NWLB must exercise that discretion strictly within the framework of the national economic stabilization and price control policy.

What the future holds for the Little Steel formula remains to be determined. Although such agencies as the U. S. Bureau of Labor Statistics and the National Assn. of Manufacturers have agreed that most industrial workers already have received pay increases that aggregate 15% over their January, 1941, rates, the fact that many have not, keeps the formula from being an historic relic.

• **Up to Byrnes**—The new rules under which OES operates provide that Byrnes must pass on every wage adjustment award that might have an effect on price ceilings. And only OPA has the authority to say what will affect prices.

In the final analysis, this means that the Little Steel formula will have only as much validity as OES and OPA decide to allow it. Both have emphasized, in regulations and official statements, that a cost-of-living scale for wage adjustments is not encompassed in their concept of economic stabilization. If NWLB is convinced that the two reviewing agencies mean what they have said, the Little Steel formula is ready for the archives.

• **Subsidies Involved**—In upholding NWLB's nonferrous-metal wage award, Byrnes simply transmitted to the board the approval of OPA. Noting the "unique character of the situation presented," OPA, rather than sanction a change in copper's price structure, provided for additional subsidies to nonferrous metal producers through the federal Metals Reserve Co.

## Workers' Melon

**U. S. Steel's disbursement of retroactive pay boost spurs war bond sales, but Pittsburgh stores feel no resultant boom.**

A \$13,000,000 windfall has been placed in the pay envelopes of 225,000 employees of five operating subsidiaries of United States Steel Corp. A rush to buy war bonds followed.

• **Ordered by NWLB**—The flood of cash represented the retroactive pay increases which the National War Labor Board ordered Big Steel to give to its wage earners in conformity with the Little Steel decision (BW—Jul. 22 '42, p80). Averaging \$57 for an employee, the back pay is 5½¢ an hour for every hour the employee worked from Feb. 15, when the Little Steel case was cer-

## SOCIETY NOTE

Mrs. Burke Patterson, whose husband is assistant to the president of Thompson Products, Inc., and whose name stands well up on the Cleveland Social Register, went to work the other day as an assembler of small aircraft parts at the Weatherhead Co., for wages of 50¢ an hour plus a 5¢ hourly bonus for the late trick. Civilian war activities such as the United Service Organizations and housework can be handled by older women, she explained. Her son, John, is a corporal in the 107th Ohio Cavalry. Union representatives (Congress of Industrial Organizations—United Auto Workers) said somewhat coldly that wives of Weatherhead male employees had been re-



fused jobs; that Mrs. Patterson could join the union, but her membership wouldn't be solicited.

tified to NWLB, to Sept. 1, when U. S. Steel agreed to comply with NWLB's directive order.

Sprawled all over the country, subsidiaries of Big Steel that paid off were: Carnegie-Illinois Steel Corp., National Tube Co., American Steel & Wire Co., Columbia Steel Co., and the Tennessee Coal, Iron & Railroad Co. The huge bookkeeping job involved was complicated further because checks had to be sent to many workers now in the armed services or other industries.

• **No Silk-Shirt Era**—The payoff demonstrated again to Pittsburgh merchants that war workers, at least in their area, where a large amount of the bonus was distributed, are not starting another silk-shirt era. The fact that the payment produced little change in retail business puzzled Pittsburgh's department store executives. Sales so far this year are only 5% above the same period last year—a figure far below sales increases in many other booming defense sections.

As a result of a campaign by the Congress of Industrial Organizations' United Steelworkers of America, which negotiated the wage increase, a goodly share of the retroactive pay went into war bonds. A union leader estimated that the finance companies and other creditors of the steelworkers were the next best beneficiaries.

• **Quick Bond Sales**—Lorain (Ohio) employees of the National Tube Co. invested \$40,000 of the back pay in war bonds in five hours, and then the special booths set up near the pay windows were exhausted temporarily of bond certificates.

Workers at the Worcester (Mass.) plant of the American Steel & Wire Co. subscribed to \$20,000 of bonds within a few hours. Approximately 20% of the bonus paid to workers at Carnegie-

Illinois's Vandergrift (Pa.) plant went into the purchase of bonds and stamps.

## Pirating Banned

**Sixty leading war plants in Buffalo agree to voluntary pact "for the full utilization of manpower" in area.**

Labor piracy in the Buffalo-Niagara area was virtually outlawed this week when more than 60 leading war plants began operations under one of the first formal voluntary agreements "for the full utilization of manpower." Their signatures on the agreement, approved by both the American Federation of Labor and Congress of Industrial Organizations governing councils, will be followed by a similar written compact binding union members. The program has War Manpower Commission approval.

• **The Agreement's Provisions**—The agreement, binding for the duration of the war, is a tangible result of WMC regional director Anna Rosenberg's visit to Buffalo a month ago. It provides:

(1) No employer will hire a worker from another war plant unless the worker can produce a certificate of release from the former employer or from the U. S. Employment Service. Should a worker be unable to obtain such a certificate from his former employer or the service, he can appeal to WMC for final action.

(2) Employers will utilize the services of USES and will not advertise for skilled workers unless the following clause is used: "No person now working in a war production plant need apply."

(3) Employers agree to cooperate with WMC in reducing absenteeism,

utilizing fully upgrading and job dilution in plant and pre-employment training.

(4) Employers agree not to solicit workers from outside areas unless they have permission from USES to do so.

(5) Employers agree to make every effort to utilize women, minority, and other groups not ordinarily employed, and workers from nonessential industries.

(6) Employers agree to publicize the compact to their employees.

## Lewis Shellacked

Workers in five plants of Harbison-Walker give sweep to Murray's clay products union in NLRB elections.

Philip Murray's Congress of Industrial Organizations scored a "shut-out" victory over John L. Lewis's "catch-all" District 50 of the United Mine Workers of America in a series of National Labor Relations Board elections in the heart of the mining region.

• Sweep in Five Plants—The balloting, billed as a test of strength between Murray and his former partner, Lewis (BW—Oct. 24 '42, p92), turned into a rout for the Lewis forces. The United Clay Products Workers, affiliated directly with the C.I.O., easily won collective bargaining elections at five Pennsylvania firebrick plants of the Harbison-Walker Refractories Co. Opposing the C.I.O. was the United Construction Workers Division of District 50, the new organizing arm officially created at the recent U.M.W.A. convention in Cincinnati.

The score at the five plants in two days of voting:

Clearfield No. 2—C.I.O. 142; District 50, 3.

Retort—C.I.O. 81; District 50, 0.

Barrett—C.I.O. 121; District 50, 8.

Wallacetown—C.I.O. 64; District 50, 1.

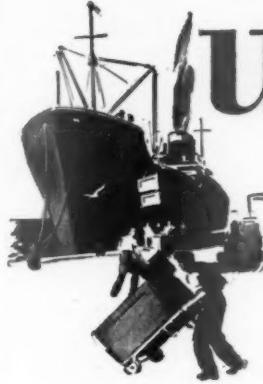
Lower Woodland—C.I.O. 60; District 50, 1.

In an election held a month earlier at the Clearfield No. 1 plant, the C.I.O. won 195 to 0 over District 50.

• Not Always So Easy—The C.I.O. found the going tougher at three Harbison-Walker plants where District 50 was not involved and the question on the ballot was "yes" or "no" on whether the workers wanted to be represented by the C.I.O. clay workers' union. Employees at Clearfield No. 3 voted 149 to 4 in favor of the C.I.O., and the Clearfield Machine Shop workers voted 28 to 26 for the C.I.O. But at the Upper Woodland plant, the C.I.O. lost by an 11 to 4 vote.

After a spirited campaign, the voting in the five plants was the first major

# "Scraped up" for a 6 p.m. Sailing



A BRITISH FREIGHTER had pulled into an Eastern shipyard for repairs. Its signaling system was badly damaged, and a number of special parts and supplies were needed by sailing time on the following day.



THE GRAYBAR SIGNALING SPECIALIST got the call, and from GRAYBAR'S own warehouse stock filled all of the requirements *but one*. The last item on the order was for 6-watt, 6-volt lamps...an off-standard item which no one in the city had in stock.



ORDER FILES in GRAYBAR'S office gave one final clue: Some weeks before, a research laboratory in a neighboring city had ordered lamps of this special type. Yes, the laboratory reported, they'd be glad to release them for this more essential need.



AS THE HOURS TO SAILING TIME DWINDLED, a GRAYBAR Representative drove to the laboratory and secured the lamps...only to discover that they had all been red-coated, while the ship's order called for lamps that were clear glass.



USING A PENKNIFE, as he sat in his car the GRAYBAR man literally "scraped up" the lamps to fill the order as per specifications. The complete order reached the ship in time for the 6 p.m. sailing.

Your own orders  
for electrical supplies to increase  
the efficiency of war plants get  
the benefit of this same willingness  
to serve when they go to one  
of GRAYBAR's local "mobilization  
points". GRAYBAR can help you  
conserve manpower, simplify pur-  
chasing, and speed up the delivery  
of critical needs. Why not take  
advantage of this "know-how"?

## Graybar

MOBILIZATION POINTS IN OVER 80 CITIES  
Executive Offices: GRAYBAR BUILDING, NEW YORK, N.Y.

Bringing together more than 200 manufacturers... 20,000 customers





## America needs a Food Administrator—NOW

**I**N war or in peace, you and your fellow Americans require 1,465 lbs. (raw weight) of food every year. Soldiers require even more.

In all, for ourselves and our allies, America must produce, process and transport 250 billion pounds of food per year, for the duration, and for many years thereafter.

► Don't try to remember that figure, but *do* remember that food processing is a huge industry, in a high state of technical development, but not yet fully coordinated into the war effort.

The food industry needs over-all coordination, comparable to long-last rubber coordination. America needs an administrator of food supply; to assure priorities in equipment and transportation and to end conflicting and overlapping committee jurisdiction.

If the food supply gets into a tangle, through lack of a comprehensive plan, the result will make the rubber shortage seem a picnic in comparison.

► In the impending pandemonium, the Food Production Engineer will be strictly in the middle. He is neither a grower nor a global strategist, but a production man who must needs wait for government to call its shots on growing, equipment production and distribution.

The Food Production Engineer must see that the food is grown in proper quantities, at proper distances from his plant, and delivered in perfect condition . . . From that moment, he has all the problems of ordinary manufacturing, plus the job of contriving to retain the fleeting qualities of color, aroma, taste, texture and nutritive value which nature intended only for a few brief hours of ripeness.

That was tough to do, even in the days of unlimited refrigeration and canning. But under the urge of saving cargo space for men and munitions, new miracles have been worked.

Fortunately for us, in the continuous battle between bulk and low cubic content, the latter is winning.

Food Production Engineers—by developing machines and processes for trimming and compressing—have reduced whole sides of beef to a carton the size of a suit box.

► They have replaced sunken refrigerator ships by lining the holds of ordinary cargo vessels with boxes of frozen lard. Preserved by this Yankee "ice house" trick, frozen meats arrive overseas in perfect condition—while the lard goes to allied explosives plants for making TNT.

Eggs, stripped of their shells, travel through a fabulous array of processing machines, leaving space-taking water in America, but sending every ounce of energy-giving food value to our far-flung armies and allies.

When the Food Processor gets through with a basket of ripe tomatoes, you can hold the resulting cellophane package in the palm of your hand . . . and only replaceable water has been lost.

► The work these men are doing will easily be the equivalent of launching a ship a day, as the processes which have been perfected are applied in more and more food plants.

If, under the constant pressure of tire, tin, and freight-car shortages, you find yourself sitting down to meals of dehydrated meats, fruits and vegetables, you can thank the Food Production Engineer for the fact that the tomato dishes will be ripe—red and delicious in taste, that soups are full-flavored and nourishing. That nothing has been lost but the water you have replaced.

*Reprints of this advertisement are available in handy booklet form.*

**McGRAW-HILL PUBLISHING COMPANY, Inc.**

330 WEST 42ND STREET

NEW YORK

This advertisement appeared  
in a group of newspapers on  
Tuesday, October 13, 1942

# How do you get the cube root of a cow?

**R**EAD the newspaper advertisement, reprinted opposite, and you'll see we are telling the public (and government) about the job engineers are doing in stuffing bigger food production into fewer ships.

When you get to that part of the ad that tells about Food Engineers reducing a cow's carcass to the size of a couple of suit boxes, you will have reached the point where McGraw-Hill really lives.

In Food Production, too, it's our job to collect the "how-to-do-it" news on each new advance in technology and equipment, and pass on this information to an entire industry.

The Industrial Press of America implements the exchange of ideas, which is a national characteristic and one of the secrets of our industrial development.

Through the interchange of ideas, made possible by the Industrial Press, the sum of American technical genius is greater than the sum of its parts.

If a food engineer in Illinois learns how to add and control Vitamin A in a food product, all food manufacturers learn how it was done, through a magazine like FOOD INDUSTRIES.\*

If a manufacturer develops a new dehydrating machine, production men learn what it will do and how it operates, through the informative and helpful advertising that is characteristic of the Industrial Press.

No matter what your industry or your job, you can probably remember many instances where an industrial magazine has helped you find a solution to a production problem.

But valuable as they are, Industrial Magazines cost only a few dollars per year.

That's why the route slip is so puzzling. If a man needs to see a magazine at all, he should not be under pressure to pass it along.

For help in studying the proper distribution of technical magazines among the men in your organization, write to the Reading Counsellor, c/o McGraw-Hill Publishing Company, Inc., 330 West 42nd Street, New York.

\* \* \*

## THE McGRAW-HILL NETWORK

23 publications, which gather "war-news" from the "war-production-front" through a staff of 153 editors and 725 engineer-correspondents . . . More than 1,000,000 executives, designers, production men and distributors use the editorial and advertising pages of these magazines to exchange ideas on war-production problems.

## THE McGRAW-HILL BOOKS

Publishers of technical, engineering and business books for colleges, schools, and for business and industrial use.

## McGRAW-HILL PUBLISHING COMPANY, Inc.

330 WEST 42nd STREET • NEW YORK

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## THE McGRAW-HILL NETWORK OF INDUSTRIAL PUBLICATIONS

American Machinist

Aviation

Bus Transportation

Business Week

Chemical & Metallurgical  
Engineering

Coal Age

Construction Methods

Electrical Contracting

Electrical Merchandising

Electrical West

Electrical World

Electronics

Engineering & Mining Journal

E. & M. J. Metal and Mineral Markets

Engineering News-Record

Factory Management & Maintenance

\*FOOD INDUSTRIES—Shows how to Man-  
age Production, Retain Nutrition and Appeal.

Mill Supplies

Power

Product Engineering

Textile World

Transit Journal

Wholesaler's Salesman

# It's Up to Us to Plan Now for 194? A.V.

\*AFTER VICTORY

**INDUSTRY'S No. 1 obligation today**  
*is to turn out the tools of war and keep on turning them out in ever increasing quantities until this war is won. And industry is doing just that.*

Industry has another obligation as well... to lay the plans and sow the seeds of a sound, lasting post-war economy. After victory there will be many problems...problems of readjustment, of employment and production...problems that we should face now—together. Let's plan now how best to apply our expanding skill and experience to post-war times, and be sure that the hard-won victory will be worthy of those who will have won it.

## ERICSSON

SCREW MACHINE PRODUCTS CO., INC.  
25 LAFAYETTE STREET, BROOKLYN, N.Y.



ESTABLISHED 1811

(Right) A few of our precision-made parts that help "Keep 'em Flying and Fighting."



## New Products Wanted

MODERN, well organized manufacturing and sales corporation located in central New England who have increased manufacturing facilities to produce greater production of all items, interested in studying with machinery manufacturers or inventors who have items of merit which possibly could be added to our line of products for either war or post-war production.

If it is felt that you have an item of definite merit, write us at BO 324, Business Week, 330 West 42nd St., New York City, and we shall arrange a get-together.

test since Lewis's mine workers seceded from the C.I.O. (BW—Oct. 17 '42, p. 87). The jurisdictional squabbles in the Harbison-Walker plants started last summer when leaders of the United Construction Workers Organizing Committee took their group into U.M.W.A. District 50. Some of the workers rebelled at the merger and obtained local union charters directly from the C.I.O. The company petitioned the National Labor Relations Board for elections to determine which group should have collective bargaining rights.

• **The C.I.O. Viewpoint**—Anthony J. Federoff, regional director of the C.I.O., claimed the election results showed the "continued trend" among workers toward the "autonomy which means democracy in labor unions."

"Held in the heart of the mining district, these elections prove that the recent mine workers' convention at Cincinnati was a packed convention and did not express the views of the membership at home, particularly in the provisional government districts," Federoff interpreted.

• **Another Turns Down** John L. Lewis's "catch-all" District 50 suffered another defeat recently in balloting at Wheeling, W. Va. There, 264 employees of the G. E. Stifel Co., textile manufacturers, voted for the C.I.O. Textile Workers, and only six favored District 50.

## PENNSYLVANIA C.I.O. HALVED

Withdrawal of the United Mine Workers of America from the Congress of Industrial Organizations involves some extensive shakeups in C.I.O. state and local industrial union councils, but none probably as deep-rooted as that assuming shape in Pennsylvania.

There, because of the heavy concentration of bituminous and anthracite mines, the U.M.W.A. has been the tail that wagged the dog. So completely has the U.M.W.A. dominated the Pennsylvania Industrial Union Council that the impending divorce will cost the council 54% of its per capita tax membership.

'Sheer volume of the miners' voice, however, was a factor which discouraged many local unions of other C.I.O. international unions (notably some steel and electrical workers) from affiliating with the state body. That accounts for the confidence of John A. Phillips, P.I.U.C. president, that new affiliations will offset the loss of the U.M.W.A.

Three members of the official family already have resigned. Secretary-treasurer Lester Thomas quit to become U.M.W.A. legislative representative in Harrisburg. Vice Presidents James Mark and John Kmetz, both loyal adherents of John L. Lewis, retired from P.I.U.C. office to devote exclusive attention to the affairs of the miners.

# FINANCE

## SEC's Handful

Securities commission has an extraordinary lot of fights already started, yet shows no qualms about a few more.

Wall Street may have had a dull time lately, but the Securities and Exchange Commission has found plenty to keep it entertained—if not happy. In the last few months, SEC has built up a list of unfinished fights that impresses even the oldtimers. With half a dozen major legal battles coming to a head and two controversial regulations still unsettled, it is sure to have one of the busiest winters in its history.

• **One More Job Taken on**—Securities men cross their fingers and pray it will be busy enough to keep the commission from starting anything new, but they haven't much hope. Only last week SEC cheerfully took over the job of prescribing capital requirements for over-the-counter dealers. First suggested by governors of the National Association of Securities Dealers (BW—Aug. 1 '42, p. 61), this proposal raised such a storm in the counter market that SEC had to intervene.

After reviewing the case, the commission decided to lay down its own rules. Beginning next January, it will require all counter dealers to stay within a maximum ratio of indebtedness to capital of 2,000%. The N.A.S.D. had proposed a minimum capital requirement of \$5,000 for a dealer who does his own clearing, \$2,500 for others.

• **Enforcement Problems**—Dealers think the SEC plan is fairer to small houses, but many still choke over the idea of minimum requirements. They predict that SEC will have its hands full when it tries to enforce its rule.

An even sorrier spot with counter men is the commission's proposed disclosure rule. Early in August, SEC circulated drafts of a regulation that would force dealers to reveal the best independent bid-and-asked price quoted on a security before they put through a deal with a customer. It asked for comments, and it got plenty—all of them vitriolic. Dealers howled that bid-and-asked quotes mean nothing for inactive securities, that the rule would stifle trade and spoil their sales.

• **Squabble in Municipals**—Dealers in municipals, exempt from regulation under the Maloney Act, were outraged at the disclosure proposal, which they considered an illegal attempt to subjugate them. Their anguish promptly echoed in Congress, where Representative Lyle



Photo courtesy of Curtis-Wright Corporation  
—Propeller Division.

## 2000-TONS of HARNESSED POWER

This mighty Birdsboro Hydraulic Press toils night and day turning out propellers for our air forces. With a 2000-ton squeeze it presses the camber (curved) plate of hollow steel blades to the exact shape necessary for the correct thrust.

Characteristic of all Birdsboro Presses it is engineered to give the maximum production at maximum speed so vital to America's War effort.

The many years of experience of Birdsboro engineering department is at your disposal, to assist, if you desire, in formulating and developing specifications that will best meet your hydraulic press requirements. We'll appreciate the opportunity to be of service to you.

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## What's Happening to the Cost of Living

	Food	Clothing	Rent	Fuel, Ice, & Elec- tricity	House Furn- ishings	Misc.	Total Cost of Living
August, 1939.	93.5	100.3	104.3	97.5	100.6	100.4	98.6
Sept., 1940..	97.2	101.6	104.7	99.3	100.3	101.4	100.4
Sept., 1941..	110.8	110.8	106.8	103.7	112.0	105.0	105.1
October ...	111.6	112.6	107.5	104.0	114.4	106.9	109.3
November ...	113.1	113.8	107.8	104.0	115.6	107.4	110.2
December ...	113.1	114.8	108.2	104.1	116.8	107.7	110.5
January, 1942.	116.2	116.1	108.4	104.3	118.2	108.5	112.0
February ...	116.8	119.0	108.6	104.4	119.7	109.4	112.9
March .....	118.6	123.6	108.9	104.5	121.2	110.1	114.3
April .....	119.6	126.5	109.2	104.3	121.9	110.6	115.1
May .....	121.6	126.2	109.9	104.9	122.2	110.9	116.0
June .....	123.2	125.3	108.5	105.0	122.3	110.9	116.4
July .....	124.6	125.3	108.0	106.3	122.8	111.1	117.0
August .....	126.1	125.2	108.0	106.2	123.0	111.1	117.5
September ...	126.6	125.8	108.0	106.2	123.6	111.4	117.8

Data: U. S. Bureau of Labor Statistics; 1935-39=100.

H. Boren of Oklahoma called the new ruling proposed by SEC "a positive evasion of a directive of Congress," and threatened the commission with further legislation.

On top of that, the N.A.S.D., which usually plays ball with the commission, turned in a bitter memorandum calling the new rule impractical and unfair to the securities business. By implication it even threatened to dissolve itself if the rule went through. "There would be no further need," it commented sadly,

"for the Association in the field of work in which it has been most active and successful."

• **Proxy Proposals Raise Outcry**—With the disclosure fight in full swing, SEC branched out in another direction and proposed a new set of rules to govern proxy solicitation (BW-Sept. 1942, p95). It wanted, among other things, more detailed information on executive compensation, tighter restrictions on proxy voting, and a space three inches square on the form where a stockholder could insert any limitations he wished. Again the commission asked for comments, and again it got plenty of scorching replies.

For a second time Congress emitted warning rumbles. In this case, the speaker was Representative Walter A. Lynch, of New York: "I do maintain that if the SEC has not enough work to do under its present regulations, then it should release its excess employees for real war work and not create unnecessary work so that it can hold their jobs by tying up our industries in new lengths of governmental red tape." This caught SEC in a sensitive spot. Already this year it has had to reorganize its staff to adapt itself to a slimmer budget.

• **Deadlines Passed**—The commission has now fallen a good way behind its timetable on both regulations, and securities men think there has been considerable soul searching in its Philadelphia headquarters. When it first announced the disclosure rule, SEC said it wanted to act by the end of August. Deadline on the proxy regulations was Oct. 15.

Technically the commission can let both rules drop now if it wants to, but it couldn't back down at this stage of the game without a lot of embarrassment. On the other hand, if it decides to adopt the new regulations, it will furnish its critics with a lot of ammunition.

• **Death-Sentence Cases**—In the mean-

time, several big cases challenging SEC's power under the holding company "death sentence" are slowly working their way toward the U. S. Supreme Court. Nearest to completion is the assault by United Gas Improvement Co. on Section 11 (b) (1) of the Public Utility Act of 1935—the geographic integration clause. In the Third Circuit Court of Appeals at Philadelphia, United Gas has charged SEC with "unconstitutional and unstatutory procedure" in its administration of the death sentence. If the Supreme Court should rule against it, SEC would lose one of its heaviest clubs for utility reorganization.

Other suits, principally that of Commonwealth & Southern in Philadelphia, challenge the commission's authority under Section 11 (b) (2)—the corporate simplification clause. SEC expects to win all its cases in the end, but it knows that until the law is settled holding companies will stall for time.

**Straw in the Wind**—Nobody knows how seriously SEC is taking its troubles, but one piece of Wall Street gossip may provide a clue. Chairman Ganson Purcell recently moved from Philadelphia back to Washington. Securities men guess that the commission is afraid of losing touch with its friends in the capital and has delegated the fence-mending job to Purcell.

## BANKS LOOK AT RECEIVABLES

As the volume of ordinary commercial loans shrinks with the decline in civilian business, bankers are looking round for new ways to use their resources. This week the American Bankers Association called attention to accounts receivable financing by mailing its members a booklet outlining credit requirements and operating techniques for loans against open accounts.

Receivables financing is not a new thing by any means, but banks usually regard it as a tricky business. In the past they have left most of it to factoring houses and specialized finance companies. But as the A.B.A. booklet points out, if a bank uses discretion, it can turn nice profit in receivables financing without running any more risk than it does on an ordinary loan.

## RAILROAD NET GAINS

While most manufacturing and distributing corporations mournfully record a steady drop in income after taxes, railroads continue to win back some of the prosperity they enjoyed years ago. In the first nine months of this year, Class I roads rang up net income of \$72,300,000, a gain of 59% over the same period in 1941.

Railroad taxes for the nine months were more than double those of last year, but they still did not offset the growth of operating profit.



## AND NOW THEY GO IN SWARMS

Yesterday—an infant U. S. aircraft industry strained and sweated to turn out 1000 planes a month.

Today—a mass-production giant pours out swarms of fighters, transports, torpedo planes and heavy bombers that are putting real sock into American offensive power.

*How was this miracle accomplished?*

Incredibly hard work, skillful engineering, production genius—PLUS a new kind of machine tool found in no other country in the world!

American aviation engineers had used these new type light-duty machines created and developed by Delta engineers during the past 15 years. They had found them adaptable, flexible, stripped of every useless ounce, capable of outperforming

ponderous machines costing three or four times as much. Most important—they knew these new machines were ready for immediate delivery in large quantities!

So—as aircraft plants mushroomed—batteries of Delta machines were wheeled in to help meet sky-rocketing production quotas. In one factory alone there were delivered and installed over two thousand Delta Drill Presses, Saws, Grinders and Abrasive Finishing Machines!

Right now—100% of Delta's output goes into the war program. In the meantime, Delta creative engineering and research continue apace. After the war, Delta machines will offer more machine value than ever to the industrial, school and home shops of America.

### Delta Machines Solve Tough Production Problem

**The Problem:** Drilling, chamfering and reaming seven taper holes simultaneously and horizontally in magnesium aircraft engine crank cases—then indexing to drill seven more holes in different positions.

**The Solution:** The special machine here illustrated, built with seven standard 17" Delta drill press heads.

**The Results:** A low-cost special machine built in a fraction of the usual time. Greatly increased production. A simplified operation employing unskilled labor, thus freeing skilled mechanics for more difficult work.



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A practical shop bulletin showing how other manufacturers are solving their problems with Delta Machines. Ask for latest Delta Catalog. Get in touch with your nearest Delta Industrial Distributor or write to The Delta Mfg. Co., 975 East Vienna Ave., Milwaukee, Wis.





**When Axis submarines struck,** the Nation's railroads were called upon to move the major part of the oil supply for the East from Southwestern producing centers; to bring Pacific Coast lumber and the bulk of Pacific Coast canned goods to the East; to more than double the all-rail movement of bituminous coal from Southern Appalachian fields into New England; and to transport many other unexpected and unaccustomed loads. Result: today, the greater part of coastwise and intercoastal traffic is being moved safely and efficiently by the all-rail route, and hundreds of vitally needed tankers and other ships have been diverted direct to war purposes.

The Norfolk and Western Railway is carrying its full share of that essential traffic which formerly moved by water. Here's just one example: during the first eight months of 1942, this railroad moved over its Shenandoah Valley line — Roanoke, Va., to Hagerstown, Md. — approximately 2,000,000 tons of bituminous coal consigned to Northern and New England States — 2,000,000 tons of coal diverted from the Port of Norfolk and the water route to N. & W. rails — rails that are out of your range — Nazi.

**NORFOLK and WESTERN**  
Railway

PRECISION TRANSPORTATION

## D. & H. Has a Plan

Railroad, faced with big bond maturity next May, ready to ask holders to accept part cash and new securities.

All last summer railroad executives watched anxiously while Congress worked over the McLaughlin bill authorizing hard pressed carriers to arrange voluntary adjustments of their debts. (BW—Apr 11 '42, p82). Now that the bill has finally reached the statute books, the chances are that Delaware & Hudson will be the first important line to readjust its debt under the new act.

• **Bonds Due Next May**—D. & H. has had a colorful record, but like most railroads, its activities, during the 'thirties, made more history than money. Next May it faces a \$48,000,000 maturity on its first and refunding 4% bonds. With working capital of about \$7,000,000, the company knows that there isn't any way it can possibly pay the bondholders off entirely in cash.

Earnings have gone up spectacularly since the war started, and the management is convinced it can liquidate the 4's over a period of time. Ordinarily it

wouldn't be hard to refinance, replace the 4's with a new issue. But in the present market, few railroads could borrow enough new money to pay for a prospectus. Hence voluntary adjustment, now authorized by the McLaughlin act, is the best course open D. & H.

• **Cash and New Securities**—The management will probably bring out its plan shortly after Nov. 15. Best guess is that it will propose a cash settlement of 10% to 20%—and the balance in set of spaced maturities running years or so. Strict sinking fund provisions will provide for retirement fast as earnings permit.

Whatever it is, this plan will go to the Interstate Commerce Commission for approval and then to bondholders for assents. After a special court review it will go back to bondholders for final assents. With final court approval and assent of 75% of the creditors, it will become binding. It's a tedious process but nowhere near as tedious as the alternative, reorganization under Section 77 of the bankruptcy act.

• **The Road's Ups and Downs**—The troubles of D. & H. have their origin a long way back. Five years ago it didn't look as though the road would ever be able to handle its \$48,000,000 maturity. Five years before that it con-

## Taxes Cut Deeper into Profits

Corporation income statements for the nine months ended last Sept. 30 show that increasing taxes have more than offset the rise in gross profits. With few exceptions, manufacturing and distributing companies report

that their tax liability has cut net income well below the first nine months of 1941 (BW—Aug. 1 '42, p60). The following sample shows the effect of this trend on representative firms (000 omitted):

Company	1942		1941	
	Net After Taxes	Taxes	Net After Taxes	Taxes
American Brake Shoe	\$2,000	\$4,750	\$2,246	\$2,340
Alleghany Ludlum	3,441	10,978	3,889	6,890
Atlas Powder	1,111	3,734	1,326	3,341
Bausch & Lomb	894	4,197	1,302	2,211
Beech-Nut Packing	1,896	3,986	2,276	2,072
Bethlehem Steel	19,656	84,370	23,998	46,030
Clark Equipment	1,232	9,250	1,523	3,423
Climax Molybdenum	8,928	7,203	6,288	1,988
Corn Products Refining	6,393	15,100	7,362	7,400
Crucible Steel	5,471	27,224	4,273	10,486
Doehler Die Casting	643	3,774	1,005	1,566
Eaton Mfg. Co.	3,069	13,804	3,101	4,632
General Electric	30,710	114,000	37,472	82,000
General Motors	83,636	87,824	161,249	205,993
General Steel Castings	1,767	10,771	2,725	1,806
Gillette Safety Razor	2,265	4,380	2,333	2,842
Hercules Powder	3,143	17,403	4,357	9,112
Hershey Chocolate	3,958	3,659	4,267	2,947
Kimberly-Clark	1,441	2,543	2,091	1,450
Lambert Co.	1,315	907	1,178	529
Libbey-Owens-Ford	1,075	617	6,997	6,288
Lone Star Cement	2,281	5,122	2,908	3,029
National Distillers	4,826	3,853	3,831	2,017
National Malleable	892	3,201	1,346	1,530
Otis Elevator	2,238	5,950	1,893	1,480
Republic Steel	10,653	54,200	17,997	29,975
Shell Union Oil	11,770	7,963	14,486	5,538
Stewart Warner	1,141	10,485	1,370	3,765
Studebaker	1,280	3,400	2,016	762
Tubize Chatillon	1,054	2,731	972	1,458
Underwood-Elliott-Fisher	1,139	5,197	2,552	2,470
United States Steel	46,496	161,600	95,688	82,286
Westinghouse Elec. & Mfg.	9,616	68,898	15,860	29,442
Wm. Wrigley	4,797	4,699	6,611	4,671
Yale & Towne	845	1,971	1,096	735
Youngstown Sheet & Tube	7,327	22,448	12,446	13,370

we paid off the whole issue in cash and kept about \$10,000,000 in its war chest. Legally, D. & H. is two separate companies, one an operating railroad, the other a holding company. The Delaware & Hudson Railroad Corp. operates 849 miles of bridge line connecting Canada and New England with interior Pennsylvania. The Delaware & Hudson Co. owns all its common stock and, in addition, holds various other properties including the Hudson Coal Co., which produces Pennsylvania anthracite.

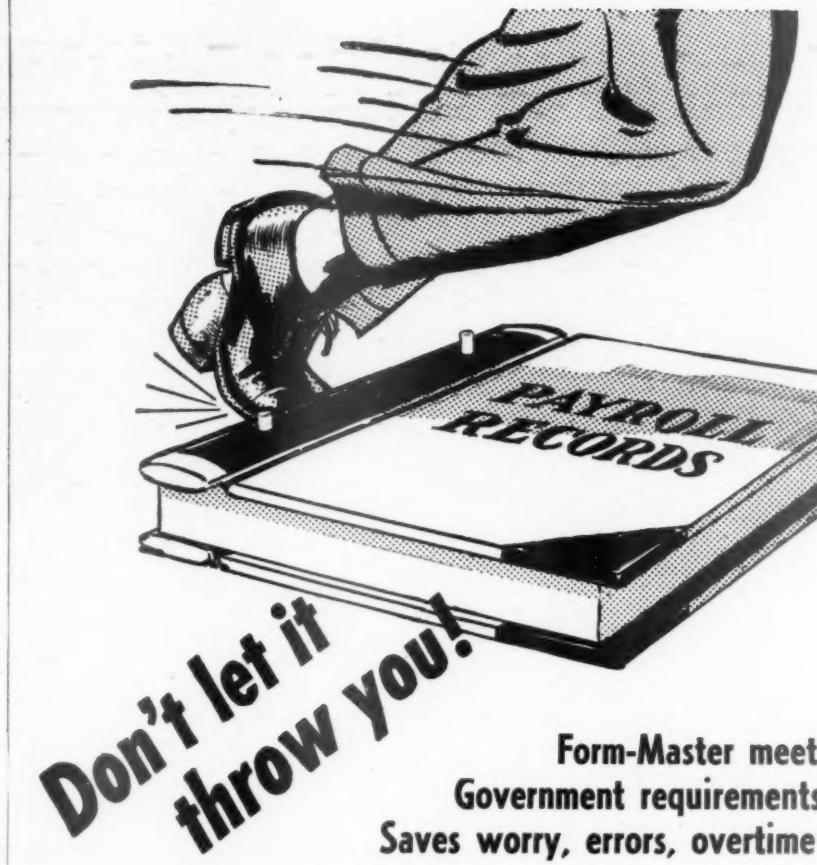
**Some Old-Time Tricks**—From 1907 to 1938, all three companies were controlled by grim, fierce-whiskered Leonor Loree, one of the last survivors of the empire-building age of railroading. From his mahogany and marble office in New York, Loree directed a series of coups that showed modern Wall Street that the days of Vanderbilt, Gould, and Harriman were like (BW—Feb. 8'33, p. 14).

That was in 1927, when system consolidation was in the air. Annoyed when the big roads ignored his comparatively tiny D. & H. in their plans, Loree sold \$35,000,000 of Hudson Coal Co. bonds and bought working control of the Lehigh Valley and the Wabash. Object was to kick over the merger applecart and write his own consolidation plans. When the Interstate Commerce Commission balked him on that one, Loree sold Lehigh and Wabash to Pennsylvania at a profit of \$3,000,000.

**Buys into New York Central**—He nursed his portfolio through the first part of the depression and in 1933 descended suddenly upon the market to snap up 10% of the common stock of the huge New York Central System. In 1937 his 500,000 shares of Central had doubled in value. He sold 85,000 shares, but his holdings still represented the largest single block in the company. In the meantime, both the D. & H. and the Hudson Coal Co. were feeling the depression. Both ran big deficits year after year, and the parent company had to dip into its investment portfolio to make up the loss. Moreover, after 1937 railroad stocks slid steadily downward, and the company's investments sank. In 1932 the balance sheet carried investments at \$53,403,000. At the end of 1941 the company valued its portfolio at just \$4,857,000. And the intervening nine years had brought the company to within one year of its 1943 bankruptcy.

**New Kind of President**—Loree resigned in 1938, and to replace him D. & H. brought in a different sort of trooper (BW—May 7'38, p. 47). The new president was Joseph H. Nuelle, a Beta Kappa, graduate of Exeter and Princeton, former president of Lehigh Coal and Navigation and of Lehigh & New England Railroad.

Nuelle has concentrated on opera-



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• NEED A MAN to put your plans to work? Eleven years experience organization and sales management with present employer's associate companies. Thirty-four, married, two young children. Desired salary \$5600. Box 308.  
• ASSISTANT TO EXECUTIVE. Engineering Graduate, 35, qualified to relieve General or Works Manager of important details. Engineering control, statistical and administrative experience. Box 309.

### "clues" information

"clues" appears weekly. Copy required Monday for Saturday's issue. Rate: 50 cents per word or \$2.50 per line (or fraction) per insertion, payable in advance. Minimum charge \$5.00. Discount 10% on orders for insertion in 4 consecutive issues. Publication box number address counts as 2 words; replies forwarded without charge. Address replies c/o Business Week 330 W. 42 St., New York, N. Y. Copy November 16 for November 21 "clues".

## THE MARKETS

Now that the 1942 tax bill is settled, Wall Street expects that a number of companies will hustle to qualify for debt repayment deductions. United States Steel has already started the procession by calling \$30,000,000 of its serial debentures. Two other companies, Studebaker and Marshall Field, are doing the same thing on a smaller scale.

• How the Offset Works—Under the new law, all companies are entitled to a 10% refund on their excess profits taxes, payable after the war. In the meantime a company that retires part of its debt can deduct 40% of the repayment from its tax bill and charge it against the postwar credit. U. S. Steel, for example, will be able to deduct \$12,000,000 from taxes on this year's income, but, of course, by taking the deduction now, it reduces its postwar credit by \$12,000,000.

Big advantage of the debt repayment provision is that it gives many companies a chance to trim down their interest charges. In the long run they will pay the same amount of taxes, but if they absorb part of the postwar credit in debt retirement, they save the interest on it.

• Saving Is Cumulative—Big Steel will repay its debentures by deducting \$12,000,000 from taxes and \$18,000,000 from its cash account. Interest rate on the series it is calling will average about 1.8% next year. Hence, by applying the \$12,000,000 to debt retirement, it will save something like \$216,000 in 1943. Total amount of interest saved will depend on how long the company has to wait for its postwar refund.

For Studebaker and Marshall Field, the percentage saving will be even more than Big Steel's, but the actual amounts are much smaller. Studebaker decided to pay \$458,000 in deferred interest on its

6% convertible debentures and to retire \$1,000,000 principal amount. In addition, regular sinking fund provisions will take care of another \$450,000. Marshall Field announced that it would retire an extra \$750,000 of its 3.6% bonds. This brings the company's total redemptions up to \$2,200,000 for the year.

• Redemptions and Dividends—Effect of debt redemptions on stock prices is hard to estimate. In the long run, cutting down funded debt should improve the standing of equity holders, but if a company uses a lot of its ready cash for bond retirement, it may not have much left for current dividends.

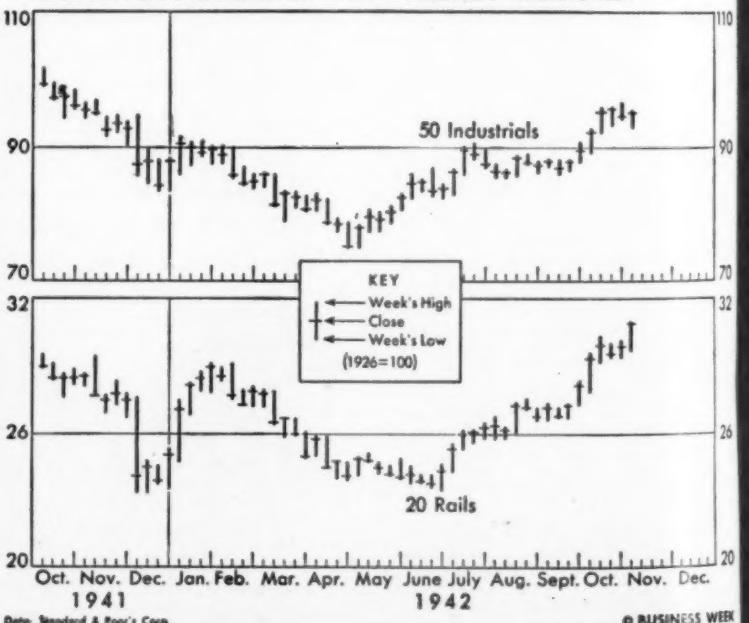
In any case, the market as a whole has pretty well demonstrated that war news is the big variable in price equations. Last week traders were obviously worried about the somber news from Guadalcanal. When reports brightened up over the weekend, the market took on a much happier look. Republican gains in Tuesday's election brought a shower of buying orders, but most traders considered the political situation a side show.

### Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial	95.1	94.5	92.4	95.6
Railroad	30.9	29.9	29.4	28.6
Utility	35.8	34.8	32.4	39.7
Bonds				
Industrial	112.3	111.6	110.8	105.5
Railroad	89.0	88.4	87.8	85.4
Utility	107.8	107.1	106.6	107.2
U. S. Govt.	110.0	110.0	109.9	112.8

Data: Standard & Poor's Corp. except for government bonds which are from the Federal Reserve Bank of New York.

### COMMON STOCKS—A WEEKLY RECORD



ns, taking a strict hands off attitude toward investments. The company still owns 304,600 shares of Central in its portfolio, waiting for the market to improve enough to take them. Bought at \$30, the Central stock couldn't bring more than \$12 today.

**Operating Efficiency**—War traffic has made it possible for Nuelle to cash in his operating policy. In 1938, the road averaged 971 net tons per train mile for the first nine months of this year, average was up to 1,317. Gross ton miles per mile of road per day shot from 7,416 to 18,116. At the same time, the operating ratio worked down from 82.81 in 1937 to 64.96 last year. In 1941 the railroad corporation earned \$3,024,000 net income, which compares with \$762,000 the year before and \$1,593,000 in 1939. Back of 1941, a line of deficits stretches to the beginning of the thirties.

In the first seven months of 1942 the road showed net income of \$2,715,000. For the same period last year it had \$2,037,000.

**Looking into the Future**—Like other roads, D. & H. doesn't know how long the prosperity will last, but it thinks that after the war it will be a lot better than before. It hopes that from now on there will be more trade across the Canadian border, reflecting a closer economic union of Canada and the United States. It also expects anthracite to have a better market as wary home users replace oil with stokers to avoid oil shortage.

The MacIntyre development of the National Lead Co. in upstate New York has the management interested. D. & H. is putting a 33-mile line into service to bring out titanium from the mine. If the working turns out well, it will provide a big source of postwar income.

**Not a Case for the Courts**—With all factors in its brief, D. & H. can make a good case for adjusting the 1943 matter so that future earnings can work out. Probably the majority of bondholders will agree. With the road earning money, nobody will want to throw it into formal reorganization.

When the company announces its plan, however, some bondholders may demand a better settlement. Main issues will probably be the size of cash payment and the question of whether bondholders get conversion privileges. Anything less than 20% cash is likely to disappoint some creditors, but it is doubtful if the company will think it safe to go that high.

**One Who Opposed the Bill**—One man at least will go over the plan word by word to see if it suits him. He is Joseph Montgomery Arkush, scholarly lawyer, Harvard graduate, and old hand in organization cases. Once a school-

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Agency—WEST-MARQUIS, INC.		Agency—FULLER & SMITH & ROSS INC.	
THE C. O. BARTLETT & SNOW CO.	55	THE LIQUIDOMETER CORP.	35
Agency—HENRY T. BOURNE ADVERTISING AGENCY		Agency—LUCENA CO., INC.	
BIRDSBORO STEEL FOUNDRY & MACHINE CO.	95	MANNING, MAXWELL AND MOORE, INC.	56
Agency—BRAMONT, HELLER & SPERLING, INC.		Agency—BRIGGS & VANCE, INC.	
BRDERICK & BASCOM ROPE CO.	26	MARCHANT CALCULATING MACHINE CO.	87
Agency—WATTS ADVERTISING AGENCY		Agency—BRISBACHER, DAVIS & STAFF	
BUELL ENGINEERING CO., INC.	50	MCGRAW-HILL BOOK CO., INC.	44, 48
Agency—TRACY, KENT & CO., INC.		MCGRAW-HILL PUBLISHING CO., INC.	92, 93
BUFFALO FORGE CO.	32	MERCURY MANUFACTURING CO.	103
Agency—MERVIN F. HALL ADVERTISING AGENCY, INC.		Agency—O'GRADY-ANDERSEN	
CAMPBELL TRANSPORTATION CO.	49	MERRILL LYNCH, PIERCE, FENNER & BEANE	96
Agency—ALLEN, HEATON & McDONALD, INC.		Agency—ALBERT FRANK-GUENTHER LAW, INC.	
CARDOX CORP.	40	METROPOLITAN LIFE INSURANCE CO.	23
Agency—EVANS ASSOCIATES, INC.		Agency—YOUNG & RUBICAM, INC.	
CLEVELAND ROCK DRILL CO.	51	MONROE CALCULATING MACHINE CO.	4th Cover
Agency—BAILEY-KREE CO.		Agency—ALLEY & RICHARDSON CO.	
CLUES	100	NASH-KELVINATOR CORP.	3rd Cover
THE COMMERCIAL TRAVELERS MUTUAL ACCIDENT ASSOCIATION OF AMERICA	45	Agency—GAYER, CORNELL & NEWELL, INC.	
Agency—MORRIS & COTTING, INC.		NORFOLK & WESTERN RAILWAY CO.	98
CONTINENTAL MOTORS CORP.	101	Agency—HOUCK & CO.	
Agency—WALLACE-LINDEMAN, INC.		NORTHERN PACIFIC RAILWAY CO.	73
COOPER-BESSEMER CORP.	29	Agency—HATTEN, BARTON, DURESTINE & OSBORN, INC.	
Agency—THE GRISWOLD-EHLEMAN CO.		OWENS-ILLINOIS GLASS CO.	72
THE CRAFT MFG. CO.	45	Agency—D'ARCY ADVERTISING CO., INC.	
Agency—PREBIA, FELLER & PREBIA, INC.		PACKARD MOTOR CAR CO.	38, 39
THE DELTA MANUFACTURING CO.	97	Agency—YOUNG & RUBICAM, INC.	
Agency—IRVING J. ROSENBLUM ADVERTISING CO.		PHILLIPS SCREW MANUFACTURERS	27
DEVOE & RAYNOlds CO., INC.	70	Agency—JAMES THOMAS CHIMICO CO.	
Agency—CALKINS & HOLDEN		PRUDENTIAL INSURANCE CO. OF AMERICA	100
DIEBOLD SAFE & LOCK CO.	77	Agency—CIRCLE & PRESSEY, INC.	
Agency—SWERDFAKER & JAMES CO.		THE RAULAND CORP.	86
ELectric STORAGE BATTERY CO.	4	Agency—ROY D. ZEFF & ASSOCIATES	
Agency—GEARE-MARSTON, INC.		REPUBLIC RUBBER DIVISION	
ELECTROLIFT, INC.	96	LEE RUBBER & TIRE CORP.	2
Agency—DOYLE, KITCHEN & McCORMICK, INC.		Agency—WHARSTLER ADVERTISING, INC.	
ERICSSON SCREW MACHINE PRODUCTS CO., INC.	94	RESINOID PRODUCTS & CHEMICAL CO.	79
Agency—SWERTZAKER & HIXON		ROYAL BANK OF CANADA	82
ERIE RAILROAD CO.	58	Agency—ALBERT FRANK-GUENTHER LAW, INC.	
Agency—THE GRISWOLD-EHLEMAN CO.		SOCONY-VACUUM OIL CO.	2nd Cover
ETHYL CORP.	6	Agency—J. STIRLING GUTHRIE, INC.	
Agency—BATTEN, BARTON, DURESTINE & OSBORN, INC.		SWEET BRIAR ORCHARDS	46
THE EVENING BULLETIN	89	Agency—LONG ADVERTISING SERVICE	
Agency—N. W. AYER & SON, INC.		SWING-O-RING CORP.	78
FAIRBANKS, MORSE & CO.	10	Agency—LEWIN ADVERTISING AGENT	
Agency—HENRY, HUST & McDONALD, INC.		SYLVANIA ELECTRIC PRODUCTS, INC.	57
FARNSWORTH TELEVISION & RADIO CORP.	71	Agency—ARTHUR KUDNER, INC.	
Agency—N. W. AYER & SON, INC.		TAYLOR INSTRUMENT COS.	36
FELT & TARRANT MANUFACTURING CO.	21	Agency—BATTEN, BARTON, DURESTINE & OSBORN, INC.	
Agency—N. W. AYER & SON, INC.		TODD CO., INC.	99
FRICK CO.	48	Agency—THE MERRILL ANDERSON CO.	
Agency—WATERSHED ADVERTISING		THE TORRINGTON CO.	60
FRUEHAUF TRAILER CO.	83	Agency—HAZARD ADVERTISING CORPORATION	
Agency—SCHIFFER ASSOCIATES		THE TRANE CO.	85
GENERAL ELECTRIC CO.	47	Agency—BATTEN, BARTON, DURESTINE & OSBORN, INC.	
Agency—BATTEN, BARTON, DURESTINE & OSBORN, INC.		UNION BARGE LINE CORP.	49
GENERAL MOTORS CORP.	66, 67	Agency—ALLEN, HEATON & McDONALD, INC.	
Agency—CAMPBELL-EWALD CO.		UNITED STATES RUBBER CO.	59
L. H. GILMER CO.	54	Agency—CAMPBELL-EWALD COMPANY OF NEW YORK, INC.	
Agency—GEARE-MARSTON, INC.		VAN NORMAN MACHINE TOOL CO.	25
THE B. F. GOODRICH CO.	1	Agency—SUTHERLAND-ABBOTT	
Agency—THE GRISWOLD-EHLEMAN CO.		WARREN WEBSTER & CO.	8
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Agency—ARTHUR KUDNER, INC.		THE WEATHERHEAD CO.	84
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### BUSINESS WEEK ADVERTISING SALES OFFICES

ATLANTA  
1011 Rhodes-Haverty Bldg.

BOSTON  
1427 Statler Bldg.

CHICAGO  
520 No. Michigan Ave.

CLEVELAND  
1510 Hanna Bldg.

DETROIT

2-144 General Motors Bldg.

LOS ANGELES  
605 W. 5th Street

NEW YORK  
330 W. 42nd St.

PHILADELPHIA  
16 So. Broad St.

SAN FRANCISCO  
48 Post St.

ST. LOUIS  
Paul Brown Bldg.

mate of Nuelle's at Exeter, Arkush represents a bondholders' protective committee claiming support of about \$1,000,000 of the 4's. He fought for a set of amendments to the McLaughlin bill that would, he insisted, give the creditors more voice in readjustment.

Arkush charges that the bill as it stands gives bondholders no chance to investigate the past conduct of management, or to offer plans of their own. Congress brushed aside his amendment but if bondholders don't like the plan his fight may not end there.



Coincidental with the concerted action of the United States and Canadian governments in freezing the output of paper, newsprint, and pulp board, W. G. Chandler (above) of Scripps-Howard Newspapers was named chief of WPB's Printing and Publishing Division, and Donald Sterling (below), managing editor of the Portland (Ore.) Journal, appointed as adviser to Donald Nelson on newspaper production problems.



# THE TRADING POST

## "Switchback" Unemployment

A letter from James W. Culliton, director of the Massachusetts Committee on Post-War Readjustment:

In your issue of Oct. 10 you quote C. Donald Dallas, president of Revere Copper Brass, Inc., as saying the problem after the war "will be that of stimulating rehabilitation of industry and agriculture to produce amazing new products that will come out of the war effort."

I agree entirely with Mr. Dallas' point of view, especially with the necessity of making sure that American corporations have financial reserves in the post-war period. Our experience to date indicates that business can consider this a most crucial issue.

There is one point, however, which our search in the problems of the post-war period shows should be given more consideration. It is the problem of timing in the post-war period.

Directly after the end of the war there will be a period of rapid and violent change which we have been calling a "switchback" period. It seems unlikely that new products of the more or less radical nature mentioned by Mr. Dallas will solve the problem of unemployment at that time. New products are the solution for the employment of American workers in the later post-war stages following the switchback, but probably not in the switchback period.

But business also has a responsibility to help solve the problems of the switchback period. It appears to us at the moment that proper planning now by corporations to do maintenance and repair jobs that have been postponed by priorities or necessities of war, meet some of the pent-up demands even of old products, and to get back into production quickly is a better solution for unemployment in the switchback period than the prospect of unusual and drastically new products which may not be ready for production quickly enough.

We do not deny the importance of new products. But their optimum usefulness in attaining employment will probably be achieved at least a year or two after the winning of the war.

## All Wags Dog

Ray D. Lillibridge, pioneer industrial advertising expert, recalls, in these days of swift innovation, an item he once noted in his "Lillibridge Viewpoint." Colonel H. G. Prout, in his biography of George Westinghouse, was describing obstacles met by the inventor of air-brake in his early endeavors to induce that improvement in railroad practice. In that connection the colonel observed:

"A man is a reasoning animal, he is sometimes perverse. The writer remembers the early seventies, hearing officers in the army, men of Civil War experience, stand stubbornly against breech-loading rifles. If the men would fire away their ammunition too fast, it would be impossible to keep firing line supplied."

## Capsule Data

Anyone who must cope with the problem of compressing a lot of technical information into a small compass is referred to pages 8 and 9 of the October issue of the Monsanto Magazine, published by the Monsanto Chemical Company of St. Louis.

Here, on two facing pages, are summarized through words and symbols the essential facts, both offensive and defensive, concerning sixteen different chemical warfare agents.

The data include, for each of these agents, its symbol, its popular and scientific names, whether it is gas, smoke or incendiary, how it is loaded, whether by cylinder, aerial bomb, artillery shell, airplane spray, or whatnot, its odor, its physiological effect, the appropriate protection against it, whether mask or gas-proof clothing, methods of first aid, its color and form, both as loaded and when released, how long it persists, whether a matter of minutes or days, its tactical uses, and the technique of field neutralization.

And, believe it or not, let me repeat that all this information and more is given clearly and vividly for all sixteen agents on two facing pages of standard size. They are worth the study of anyone who faces a similar job of complicated presentation.

## Red Tape Noose

The proprietor of a sporting-goods store in a middle-western city writes:

We have just written to our local War Price and Rationing Board that, since receipt of OPA "Retailer's Bulletin No. 1," we find the regulations set out too complex for us to chance not observing the law.

In order to avoid being cited as violators of a rationing order, we are withdrawing from sale all rubber footwear subject to the above order, until such time as we believe we run no risk of law violation.

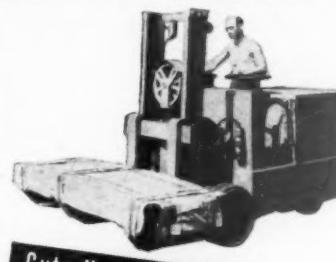
We certainly do not wish to appear unpatriotic. However, with three-fourths of our regular force in service (we had 12 trained men) and with our greatest problem now that of survival, we can see no alternative to closing down a very profitable part of our business.

Under present conditions the writer would necessarily have to make out all the desired reports, and, since he has been putting in fifteen hours daily in order to keep up, he cannot see just how he can squeeze in all the red tape necessary to satisfy the rationing board on boot sales.

Frankly, if we were put on our honor to sell only to those we know to be workers requiring boots and penalized if we make a mistake, we believe it would save a lot of reports and letters and take a lot of men from government payrolls and put them into productive enterprise.

W.C.

# Speeding Production and Distribution



**Cuts Handling Time**

Mercury Material Handling Equipment is aiding industry move more goods faster at lower cost. This Mercury truck unloads steel from box car, carries and stacks it in half the time five men could do the same job.



**Keeps Loads Moving**

The Mercury "Trackless Train" keeps loads on wheels, readily moveable for short or long hauls. The tractor can be disengaged for other work while the trailers are loaded or unloaded. No idle power or wasted time! The train can reach all corners of the plant and yards because it is not confined to a fixed path.



**Increases Storage Space**

A Mercury Fork Truck can double storage space without increasing floor space, by stacking clear to the ceiling. Thus storing at the height of profit . . . saving time, money and conserving man power. Write for free booklet showing complete line of Mercury Material Handling Equipment.

# Mercury

TRACTORS TRAILERS LIFT TRUCKS

MANUFACTURING COMPANY

4146 S. HALSTED STREET, CHICAGO, ILL.

# THE TREND

## MAKING MANPOWER MANAGEABLE

We have a manpower shortage because of the simultaneous demand on our population for a vast military organization and for industrial and agricultural production sufficient to the needs of both ourselves and our allies.

Unless we scale down our quotas either for soldier levies or for material output—a course of action which no responsible official has seriously advocated—the gap between the men we have and the men we need will increasingly widen.

As this week's report to the President by the War Manpower Commission's labor-management policy committee makes clear, there is no over-all solution to our problem. Neither labor conscription, nor a draft of women, nor administrative reorganization will turn the trick. All these things may eventually prove to be necessary, but, neither alone nor together, can they do such things as create toolmakers where none existed before or build houses in Portland so unemployed New Yorkers can be put to work in West Coast shipyards.

• **If we begin by understanding** that the limitation of human resources is a condition of war to which we must accommodate ourselves, we can start to make the problems it raises manageable. And if we manage right, we use what manpower we have to the point of its highest efficiency. The burdens of what shortages we have are then borne, not in hit-or-miss fashion, but in consonance with some plan which derives from our strategy of waging war and puts first things first.

Up until now, manpower questions have been handled without plans or coordination. We have had to witness the spectacle of the Army combing copper miners out of the ranks so that a red metal shortage would not hold up the production of necessary weapons. We have watched the War Manpower Commission, the War Production Board, the Selective Service System, the Army's Services of Supply, the Department of Agriculture, the National War Labor Board, and now the Office of Economic Stabilization all trying to do something about manpower utilization from different points of view. The few positive things that have been attempted, have been done at such cross-purposes that the benefits have cancelled out.

• **One example, not nearly the most dramatic, well characterizes the whole muddle:**

Originally under WPB, but now under WMC jurisdiction, the Training Within Industry program has sought to provide employers with skilled hands. Elaborate and expensive, but largely efficient, TWI has upgraded thousands of workers and, as an activity by itself, can be credited with a substantial contribution to industrial output. But TWI does not mesh with Selective Service. It trains all comers. And because most of these are able-bodied males between the ages of 20 and 45, local draft boards

pluck them out of factories—and TWI begins over again with another crop of potential soldiers.

As a consequence, not only is a great part of its effort impermanent and misdirected, but, in some cases, employers have actually been penalized by installing TWI program. Some local draft boards have held that, because an efficient training program was operative in a plant, an essential worker could be quickly replaced and, so, could not qualify for deferment.

• **An examination of how we have handled manpower** up to this point reveals the fact that attempts at control have been so haphazard, so un-integrated, and so irresolute that, instead of simplifying the problem, they have served to add to its seriousness and to multiply its complexities.

No one has disputed the contention that a better job could be done by a central authority set up over all the agencies now concerned with manpower and given the job of coordinating their policies in this field. Why, then, is such an authority not created?

One answer seems to lie in the very ubiquity of the manpower problem. Such vital matters as allocating materials, building plants, letting contracts, allotting transportation facilities, concentrating industry, and regulating the individual's freedom to hire, fire, remain idle, or change jobs are all involved in it. Authority given to central administration of manpower inevitably limits that of the Army, the WPB, the OES, and of many another of the wartime alphabetical agencies. And an administration that went beyond coordination of policy to take final authority over the handling of our resources men could become the most pervasive influence and the highest power in the land.

• **Coordination of policies affecting our manpower problem** seems to be a first step which we must take. The longer we hesitate before going ahead with what the situation so clearly demands, the more costly our delay becomes in terms of war service in the field and in the factory. But before we go on to more totalitarian grants of power—such as we have eventually had to give in dealing with some other phases of the war program—we should realize what kind of administrative genius we are asking this time and how deeply we would be affected by it dictates. While we consider the various less drastic proposals which seem hopeful to many business men, labor leaders, and congressmen, and to members of Mr. Nutt's labor-management committee, this much seems certain: as there comes a time when sound judgment prompts even the most cautious general to be audacious in the field, so we have now come to a point where equivocation further on manpower threatens our whole war effort.

The Editors of Business Week

Business Week • November 7, 1942

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